

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—SHADWORTH HOLLWAY HODGSON.

BY H. WILDON CARR.

ENGLISH philosophy has recently lost in Mr. Shadworth Hodgson one of its most able and distinguished representatives. He died on the 13th of June last, at his home in Conduit Street, London, after an illness of a few months' duration, at the age of seventy-nine. He was a remarkable man, loved and honoured for his devotion to philosophy by all who knew him, even by those to whom his special teaching made no appeal. Secluded and methodical in his life and work, entirely devoted to and absorbed in his one chosen task, he was yet open and free to all who cared for philosophy, however divergent their methods and aims and ideals from his own. His writings cover a period of close on half a century, and from the first established his position as an original thinker of great intellectual power. He was a founder and first President of the Aristotelian Society, and it is in connexion with that Society that he was best known and that his personal influence was greatest. The Society was founded in 1880, and Shadworth Hodgson was President for fourteen years, during which time, and afterwards up to the time of his last illness, he regularly attended its meetings and took part in its discussions. His literary work and indeed his whole life was devoted to the effort to establish and compel the recognition of philosophy, which to him was a pure science of metaphysics, a necessary branch of human knowledge. He delighted to be called, and so always described himself, a metaphysician.

Shadworth Hodgson's first philosophical work was entitled *Time and Space ; A Metaphysical Essay*, published in

1865. In 1870, he published an ethical Treatise in two volumes, *The Theory of Practice*. This was followed by *The Philosophy of Reflection*, also in two volumes, in 1878. He also published in 1880, the year in which he joined the Aristotelian Society, a volume of essays entitled *Outcast Essays and Verse Translations*. The discussions in which from that time onward he regularly took part, had this effect on his work, that they convinced him that his published writings did not fully meet the difficulties that naturally occur to those who study the problem, and that it was necessary to restate his principles and present his method in a new form, and the result was the *Metaphysic of Experience* which he published in 1898. This great work represented the labour of twenty years and attempted to set forth a complete system of philosophy. It is in four volumes, but no part was published until the whole was complete. He wished it to be judged as a whole, having designed it as a final and complete expression of his philosophy. He was disappointed with its reception, but he was not discouraged, and as he never lost confidence in his principle so he was always ready to re-present it in relation to whatever new movement might be prevalent in philosophy. His disappointment never made him bitter towards, or impatient of, other and antagonistic schools of philosophy. Indeed he rejoiced in every evidence of new interest in philosophy, however little his own sympathy with the form it took, for to him Philosophy was one, more and greater than individual philosophers. Almost his last words to the present writer were the expression of his recognition that there was work still to be done, that the new movement called for a new re-thinking of his principle in the light of a new problem. He realised with the regret of a good fighter that the work was not for him.

The intellectual interest which determined Shadworth Hodgson in the choice of metaphysics as a literary pursuit was the influence on him of the writings of Coleridge. He did not know Coleridge personally, but he tells us in the introduction to the *Philosophy of Reflection* that to his writings more than to any other source he owes the direction that his own studies took. The *Philosophy of Reflection* is dedicated "To Samuel Taylor Coleridge, my father in philosophy, not seen but beloved," and the title of the book is taken from that author's *Aids to Reflection*.

The philosophical work that seems to have given Shadworth Hodgson his point of departure was Ferrier's *Institutes of Metaphysics*, at the time that he began to write, the standard modern work on the subject. He preserved through-

out his life his admiration and appreciation of this book, to which he continually alluded and which he was always recommending as the best introduction he knew to the pure science of metaphysics. It seemed to him however that a fundamental error vitiated Ferrier's First Proposition, that which lay at the basis of his philosophical system. It contained an assumption, an assumption that it became the main guiding purpose of Shadworth Hodgson's analysis to unmask and avoid wherever it met him—the assumption of agency in the conscious subject of experience. The assumption was unconscious in Ferrier but involved in the principle that the subject-object relation is fundamental and ultimate in knowledge. The ultimate datum of knowledge in Shadworth Hodgson's view does not contain this distinction. The ultimate datum is consciousness as pure process-content, and the distinction of subject and object does not arise until a later stage in the analysis, when the simple direct consciousness has been reflected on. A conscious agent—mind, soul, self, or ego—may be a true object of belief, but it is not to be identified with a fact, in the sense that it is an immediate and ultimate perception which cannot be doubted because it is immediate and ultimate.

From his teachers Shadworth Hodgson imbibed a strong Kantian tendency from which it became his constant purpose to free himself. He returned to the method of the English philosophers, Locke, Berkeley and Hume, to the direct interrogation of experience as distinct from the attempt to transcend it by discovering the *a priori* conditions on which it is possible. Consciousness or experience, he never wearied of insisting, is the sole evidence we have for anything whatever of nature or of existence. Although he succeeded on the theoretical side in completely emancipating himself from Kant, the influence of that philosopher in his practical doctrine remained a prepossession to the end. To some extent it introduced, at least to many it seemed to introduce, a contradiction in the very principle itself on which his method relied. This was pointed out by the present writer in an article in this journal on *The Metaphysic of Experience* shortly after its appearance (No. 31, July 1899, p. 395). To Shadworth Hodgson however the importance of the practical judgment was the experience on which it rested and to which it directly appealed, and not the intellectual construction it invited us to build on it. "Scholastics say *first*, There is an all-perfect Being, and *then*, We can love him with all the heart and mind. I reverse this order. I say *first*, We can love with all our whole heart and mind, and

then, the object of this love is God" (*Phil. of Reflection*, vol. ii., 292).

The first thing that calls for remark in an attempt to give the general features of Shadworth Hodgson's philosophy is the way in which he approached his subject. No spectre in the form of "the unknowable" stood to block the way or discourage the study of metaphysics. No preliminary inquiry such as "Is metaphysic possible?" which seemed to Kant and his followers a necessary prelude or prolegomena to the study of philosophy, challenged him and threatened to make the whole enterprise vain. If we begin by analysing consciousness, he said, we shall see very early in our progress how these false problems arise and take shape, but their power to paralyse will then be gone. Metaphysics is the quite natural inquiry of the human mind to which it is led in its endeavour, which is part of its nature, to obtain a rational conception of the universe in which it finds itself, and of its relation to that universe. It comes last in the order of knowledge though it deals with that which is first in the order of existence. It comes after physics in the Aristotelian order, but its object is the real universe, the Being which is absolutely fundamental. "The knowledge of Being has, ever since the days of Aristotle, been called *Metaphysic*. The name, it is well known, was due to the merest accident, but the accident was a singularly happy one; in fact, the only Beyond—*Merá*—to physical being is consciousness, and whatever else (if anything) may be known by inference from interrogating it." Ordinary common sense experience is the *analysandum* of Metaphysics, and its method is direct interrogation of experience in order to know first, what it is in its ultimate nature, and secondly, how it comes to take its place in what we afterwards recognise as an order of real conditions.

Here then is our simple introduction to metaphysics. We begin with a vast mass of acquired experience which includes both fact and fancy. It is expressed in language which has grown up *pari passu* with it. Two questions naturally arise in regard to it, *What is it?* and *How comes it?* One is the question of its nature, the other of its genesis, and both are ultimate questions addressed to reality. Now the cardinal point in Shadworth Hodgson's view was this, that in philosophy the question *What is it?* is always prior to the question *How comes?* He founded the principle on this fact, plain and self-evident, that consciousness is the sole evidence we have of or for anything whatever, itself included. Philosophy must analyse that evidence, for it has no other, and it must

avoid all assumptions, whether they be conscious in the form of hypotheses, or unconscious in the acceptance of apparently self-evident or necessary ideas, such as that of a conscious being or agent—soul, mind or ego—who *has* the experience. It must avoid these assumptions because the object of the analysis is to discover what *is* the experience, what are the ultimate, immediate and unavoidable *data*, the *given facts* of experience. It is this method of analysing experience without assumptions that distinguishes philosophy from the subject sciences, including that science which like philosophy has the whole of conscious experience for its subject matter, namely, psychology. The sciences necessarily assume their subject matter, they advance by the progressive verification of hypotheses. In science, as in the ordinary conduct of life, we seek the explanation of facts in other facts, and there is in experience something which compels us to look for this explanation, but of experiencing itself no explanation can be given which does not itself contain another instance of the fact to be explained. And this it is that condemns the only other method possible in philosophy, the method of explaining experience by the *a priori* conditions which make it possible.

Before we try to follow the application of the method let us take note of the problem it has to solve. Consciousness reveals existence—existence that is not commensurate with the consciousness that reveals it. How can it do this? How can the analysis of consciousness give us anything, or enable us to infer anything, that is not consciousness? Either it would seem we are condemned from the first to the barren assertion that what we perceive is perception, that the only *esse* is *percipi*, that there is no being or existence independently of, or not included in, our own existent consciousness; or else, we must be able to transcend experience, the possibility of doing which is just that which our method denies. Shadworth Hodgson rejected both the alternatives. By direct interrogation of experience, by analysis of consciousness without assumptions, he insisted it is possible to, and we in fact do, gain the knowledge of a universe of independent reality.

The first important fact that the analysis of consciousness reveals is that the elements that we distinguish in experience are inseparable. There are no such things as atoms in consciousness. The *distinction of inseparables* in all experience he declared to be the most important and fundamental fact in philosophy. The simplest and lowest moment of consciousness we can imagine or think of, is not perfectly simple, it has for instance some duration and some specific

quality, but these elements, though distinguishable, are non-separable. The first and least thing in consciousness is both process and content, neither is the process the content nor the content the process, nor does either exist *per se*. It is the essential characteristic of the metaphysical method that it distinguishes inseparables.

The importance of this is at once evident in the actual analysis of the moment of consciousness, in the light that it throws on the essential nature of consciousness itself. Consciousness is a reflection, it is a looking back on a receding stream. That receding stream is moving from the present vivid actuality into the past and is yet retained in the present as it moves away, and it is also at the same time an existence which is moving from past to present. There are two opposite time directions of one and the same time duration distinguishable and inseparable in all perception, perception being the ultimate empirical datum in consciousness. This enables us to understand how one and the same consciousness can have two aspects, the subjective aspect of *knowing*, and the objective aspect of *existence*. And we see also how in the process of consciousness the object of consciousness is formed. In any simple moment of consciousness, what we may call the presentation (by which is not meant the presentation of an object but the simple content itself of present awareness, which may be a sensation, a feeling of pleasure or pain, an image or thought or idea) arises, passes from the vividness of the actual present into the dimness of the past, but as it recedes and becomes wholly past it is retained, and so long as it is retained the perception of it is present though it is past, and so the distinction arises between the past presentation now an object, and the perception of it now a representation. When we think of the present moment as a member of the stream moving from past to present we are thinking of it as *existent*, when we think of it as moving from present to past we are thinking of it as a *knowing*. Thus out of the analysis of one and the same consciousness there arise two orders, an order of knowing and an order of existence, the one receding from the present into memory, the other forward moving from past to present. Of these two orders the receding order is prior to the existence order in knowledge, for consciousness as knowing is the sole evidence for consciousness as existing. But as existence, consciousness is the objectification of its own content as a knowing. The content of each actually present member becomes as it recedes into memory the object of the next actually present member as it moves forward.

In this analysis there has been no question of genesis, but so soon as the existent character of consciousness is recognised, the question, *How comes?* is forced upon us. It is a question our nature compels us to ask with the same necessity that it makes us ask, *What is?* All that the method of subjective analysis has required is its postponement. What brings consciousness as a knowing into existence? What accounts for the occurrence, the arising of consciousness? It might still be possible to postpone this question until the analysis of consciousness, which alone can supply the answer, is complete, were every moment of consciousness equally simple, a perception in which the process content is retained throughout. We watch a simple presentation *a* arise and recede as *b, c, d* succeed it, *a* being continuously present by its retention in memory. But a new and peculiar difficulty arises when the consciousness to be analysed contains a pure memory, a recognition of a past experience cut off from the present by an interval of unconsciousness. This experience it is that compels us to infer some agency. But it is consciousness as an existence, not its nature as a knowing, that compels us to raise the question of genesis. There can be no genesis of the nature of consciousness, for that is ultimate, but as an existent it is a more or less permanent object among other objects. As a knowing it is a stream every portion of which is transitory, arising once and passing away never to return. What guarantees the permanence of the existence of the stream? What is the real condition, or what are the conditions of consciousness? For the answer we must interrogate experience, for no answer is possible except in terms of perceptual experience, whether we derive it by direct insight or by inference. Two answers are possible. Either the agency or efficiency is in the conscious process of knowing itself, or it is in the existence objectified in that knowing. Which it is, an appeal to experience can alone decide, and the issue of the appeal is in Shadworth Hodgson's view doubly decisive. Every attempt to discover agency in the process content of consciousness itself fails, and, on the contrary, analysis of that process content leads us necessarily to infer as the real condition of consciousness something that we must think of as not consciousness. The most searching analysis of consciousness as a knowing fails to distinguish anything which as Mind, Soul, Self or Ego, we can identify as the pure Subject of perception, the real condition of knowing. And not only can we not perceive a pure Subject, that is to say a perceiver apart from his perceiving process with its content (for the very idea of doing so involves a contra-

diction, the pure subject would be made an object in the very act of perceiving it), but also analysis does not justify us even in inferring it, for what we objectify when we speak of the pure subject is our own thought of consciousness in the abstract, that is distinguished from objects and objectivity. Now reality in the full sense means perceivability, that is, objectivity to consciousness, combined with efficiency or agency, that is, the power of being a real condition of the genesis of something, or of a change in something—of an event. As simple matter of fact this full meaning of the term Reality is originally given to us in the experience of matter and of an external material world. How then do we acquire this knowledge of matter and of independent reality?

The answer to this question will make clear the distinctive feature of Shadworth Hodgson's philosophy, its radical empiricism. Our idea of reality, our whole knowledge of reality, is given to us in sentient experience. His definition of reality—perceivability combined with efficiency—excluded the idea of an Absolute, or a Transcendent, or a Thing-in-itself, anything thought of as in its own nature non-perceivable. Neither could it admit the authority of any *a priori* criterion of reality, any idea of what anything must be if it is *truly* real. Actual sense data alone can reveal fact, as they alone can give it meaning. And the same reason that led him to adopt the usual scientific meaning of reality, namely, fact that is or may be experienced, against the idealist or absolutist doctrine that Reality is the Absolute as a perfect and complete individual whole, also led him to maintain the usually accepted definition of truth, namely, that it is a correct representation of fact, against the doctrine of Pragmatism that it is a practical postulate. To know reality is not to know the Totality or Completeness of the real. "When I perceive or cognise any object, the truth of that perception or cognition consists in its being a correct *knowing* of its object as a real being, or existent, or fact, or event." The fallacy of Pragmatism is the tacit substitution for the idea of reality as the object known by truth, of the idea of Totality. Totality belongs as an idea not to knowledge simply but to some department or system of knowledge. It is of particular interest in this connexion to notice his criticism of William James, who had so much in common with him, but who in a curious way managed to combine with or graft on to his radical empiricism the pragmatic theory of truth. The criticism occurs in Shadworth Hodgson's paper before the British Academy (*Proc. Brit. Acad.*, vol. v.), the last paper that he published. Prof. James,

he said, "sees no difference between defining truth as the agreement of certain of our ideas with reality and defining it as verification. As he sees no difference he finds no difficulty in substituting one definition for the other." The whole passage may be referred to as an illustration of Shadworth Hodgson's skilful dialectic combined with perfect courtesy.

The main task then that Shadworth Hodgson undertook and carried out as the essential work of philosophy was a thorough analysis of experience. By this he claimed that he could show how sense data directly or by their combination are evidence of a reality that is non-consciousness, which reality is the cause, or, as he called it, the condition, of the existence of that same consciousness which as a knowing is the only evidence of it. The accomplishment of this work he regarded as the triumphant vindication of the metaphysical method. But at the same time it exposed him to the severest criticism, and apart from its particular value it cannot be denied that it gave to his whole system an appearance of artificiality that was perhaps more than anything else the stumbling-block to its acceptance. It was a prodigious task. It was nothing less than to show how our knowledge of the external world, and of the nature of that world, of the formal and material elements that constitute it, and the knowledge of our own existence as conscious individuals in the world, arise out of simple elements or ultimate data of consciousness which as such do not contain the knowledge. The main difficulty of the task is that the knowledge of which the philosopher has to show the genesis is already fully formed and part and parcel of our common sense experience when the analysis is entered upon. If this possession of our common humanity has a history, it lies so far back in the life of the individual or of the race that it is irrecoverable. Analysis cannot therefore, if only on account of this practical difficulty, reconstitute the history of experience as a succession in time, but it can show the order of knowledge in which experience has grown into the consciousness of a world of independent reality of which we are part and in which we act. The ultimate elements of experience are sense data, and these differ fundamentally in their own nature and in the kind of knowledge they give us and in the extent of reality they reveal. It is not until experience is far advanced in the perceiving and combining of these sense data that the world is made known in the full sense of reality, that is, as perceivability combined with efficiency. It is curious to note that while time is revealed in every sensation, even in the simplest moment of consciousness,

space does not appear until much later and only in connexion with a special kind of sense data, that of vision. Organic sensations, emotional feelings, the senses of taste, smell and sound, all with their specific pleasures and pains, do not any of them, singly or combined, by themselves alone, give us knowledge of our own organic body or of the spatial world. Visual sensations give us the perception of space-extension, but in two dimensions only, length and breadth. It is tactual sensations alone which gives us the perception of space in three dimensions, and therefore the knowledge of solid bodies, one of which is our own bodily organism. But our knowledge of the reality of matter in the full sense of efficiency or agency is dependent on the combination of the two senses, sight and touch.

Shadworth Hodgson attached the greatest importance to this discovery of the part played by sensations of touch in introducing us into the world of real conditions. Every other constituent of experience could do no more than enable us to infer a world of existence independent of the world of knowing. In touch we actually enter that world. He was at great pains in all his writings and at every opportunity that debate offered him, to explain this point. It was in fact the pivot on which his whole system revolved. In tactual sensations, intensified, he thought, by muscular sensations, we have not merely evidence, but positive knowledge of a reality which is not-consciousness and which possesses an efficiency of its own independent of that consciousness which is a knowledge of it, and of whose existence it is a real condition. The favourite way in which he illustrated this doctrine was by instancing the grasping and feeling one hand with the other, or the grasping and feeling any small solid object such as a billiard ball. We find, he said, that the sensations occupy the same portion of space, at and for the same portion of time duration, as the solid object, which is a *replica* of the sensations, occupies; and we also find that this same object, the *replica*, is known as different from and independent of the sensations of which it is the *replica*. It is known to be different by two facts—first, it is capable of an entirely different analysis from the sensations, an analysis into physical parts and forces, or modes of motion, this shows that it is non-consciousness; and secondly, it produces the occurrence in consciousness of the sensations of which it is the *replica*, this shows that it possesses agency, which consciousness does not. And at the same time that it is different it is also identical with the sensations which are the immediate perception of it, for sensations and their *replica* both occupy one and the

same portion of three-dimensional space for one and the same portion of time, namely, the time of their actual presentation in experience. The reality of sensed matter thus gives to science a real subject-matter, a solid physical object which it can submit to an analysis altogether different from the analysis of the sensations which are the knowledge of it. But nevertheless it is from these sensations that all the ideas, terms and hypotheses of physical science derive their meaning. Whatever the ultimate elements into which physical science resolves matter—atoms, molecules, electrons, forces—they can only be imagined, they can only be denoted and described in terms not merely of sensitivity in general but of tactual and muscular sensitivity in particular.

By this method of analysis systematically applied throughout the whole of conscious experience Shadworth Hodgson arrived at those conclusions on the main problems of philosophy which, because his confidence in the method never wavered, he held with such tenacity throughout his life. On the question of Idealism, he rejected utterly every form of it that endowed consciousness, either as feeling, thought, or desire, with agency or efficiency, but on the other hand he held that one sense of reality is perceptibility. He accepted therefore the Berkeleyan *esse* is *percipi* as universally true for the subjective aspect of reality. In its objective aspect reality means belonging to an order of real conditioning. The term real condition was chosen by him to take the place of the older conceptions of substance and cause, for which, as Berkeley and Hume had shown, experience held no warrant. Nothing in experience explains the fact itself of experience. Experience shows us in matter and material processes the only positively known real conditions of the existence of consciousness in individual subjects. He was not a materialist. He did not conceive matter to be a cause, that is, ultimate and explanatory of its effect and of itself. Matter is itself conditioned, a combination of elements that apart would not be matter, though its conditions are unknown to us. They lie in the Unseen Universe.

On the question of the relation of Body and Mind he held that consciousness is, what it is now usual to call, an epiphenomenon, which he expressed by saying that it is always the conditionate, never the condition, of organic and inorganic interaction. The proximate real conditions of consciousness lie in the neuro-cerebral system. He did not deny the possibility of immaterial agency, and the idea of some

Animula vagula, blandula,
Hospes comesque corporis,

as the true proximate real condition of consciousness as an existent, had for him personally an overpowering attraction, but he did not allow the desire to blind him to the fact that he could find no warrant for the fact in experience.

I do not propose to give a detailed account of the ethical and religious portion of his philosophy. It was founded on the same empirical principle as the theoretic part, namely, the analysis of experience without assumptions and the postponement of questions of genesis to questions of nature. The data of this analysis are the emotions, as in the theoretic part they are the sensations. But as the former do not, as the latter do, reveal their proximate real conditions, we have to supply these by practical postulates. In so doing we gain no insight into the nature of these objects, which are objects not of positive knowledge but of faith. It is impossible to read this portion of Shadworth Hodgson's work without seeing that it expresses the intense personal longing of a deeply sympathetic mind.

On the question of free will, notwithstanding that he so resolutely opposed the hypothesis of an immaterial agency as being entirely unwarranted by the facts of experience, yet he held that in all volition we are free agents. The proof rested on scientific, that is to say, psychological, and not on metaphysical arguments. He adopted the definition of Hobbes: "Liberty is the absence of all the impediments to action that are not contained in the nature and intrinsic quality of the agent". Freedom therefore is self determination. The subject of this self determination, however, is not an entity intermediated between the conditions and the action, the common mistake of determinists and indeterminists alike, but the neuro-cerebral conditions themselves with their accompanying consciousness. Volition as a whole is characterised by deliberation and choice, modes of consciousness. The awareness or sense of freedom, is the perception of the feature universally present in volitions, namely, the uncertainty of their issue. This argument, which occupies a long section in the *Metaphysic of Experience* (vol. iv., pp. 118-180) and formed the substance of two important articles in *MIND* (Oct., 1885, and April, 1891), was one that he himself highly valued. It failed however to satisfy the upholder of the doctrine of free will as it did not establish that freedom of the person from the mechanism of nature which is for the champion of free will the main interest in the contention; it also failed as against determinism, except perhaps in the narrow sense that few determinists would accept, the kind of fatalism that he named "compul-

sory determinism" It is however an entirely admirable analysis of conscious volition from the standpoint of experience.

It is curious to notice how some of the most striking of the doctrines that have formed the basis of the bold speculations of M. Bergson are clearly set forth in Shadworth Hodgson's analysis. I have already called attention to the priority of time over space, to the psychological character of duration and its fundamental position as one of the inseparable elements of the simplest conscious process, but perhaps more remarkable is the clear way in which he has drawn attention to the spatialising of time. "Whenever we picture time-sequences by the aid of imagery drawn from space, as the language we use to describe them shows to be the universal habit, we tend to imagine the phenomena, with which time past or future is peopled by memory or by anticipation, as having a present existence in time which is not present, owing to the circumstance that we imagine them to exist in those directions of simultaneously existing space, which we use to represent the directions of time" (*Metaphysic of Experience*, i., 67). His doctrine of the reflective character of consciousness with its double aspect also seems to come very near to the distinction of experiencing from within in living and viewing from without in knowing, which is the fundamental distinction in M. Bergson's philosophy. Shadworth Hodgson, however, was never tempted to the speculative flights and brilliant syntheses that have awakened in our time a new interest in philosophy. For him the business of philosophy was patient, plodding, laborious analysis.

For this reason to many readers Shadworth Hodgson's philosophy seemed dull, but it may on that very account prove the more enduring. He had a faith in his principle which led him to bring to philosophy the training and skill and diligence that would have ensured his success in any department of science, and he devoted himself to the application of that principle in building up a substantial body of doctrine. His ideal was not to point a new direction, nor to construct a perfect and harmonious system, still less was it to satisfy the craving of the human mind for a *Weltanschauung*. His ideal was to gain for philosophy the full recognition of its high rank in the hierarchy of human knowledge, to remove from Metaphysics the reproach that it was a vain pursuit of the unknowable, to point out the definite task and exhibit the special method of philosophical study. To his devotion to this ideal we can all do homage.

II.—THE REIGN OF SCIENCE IN THE HISTORY OF A RACE.

BY ALFRED H. LLOYD.

INTRODUCTORY NOTE.—The following article is what eventually should constitute one chapter in a history, let me now call it *The History of the Humani*, that I have been working upon for some time. This chapter is published at this time as a sort of preliminary report after the manner of many workers in the field of science. In my history, in some sense necessarily a work of fiction, I would show: (1) the peculiar values and the natural temporal sequence, the "line of succession" of the following five attitudes or disciplines, namely, law, art, science, philosophy, and religion, in the course, that is in the rise and fall, of a civilisation; (2) the part taken by the life, particularly by the conflicts, of the social classes; and (3) the possibilities and the achievements of personal character which must certainly belong to civilisation and which must enlarge and deepen as a civilisation runs its course. Thus, as now planned, my history is to be a study of civilisation and personality, and, if it have any success, it should be a contribution in the field of the philosophy of history.

In general a civilisation must be said to proceed with the development of sophistication and finesse in the life and consciousness of the particular race concerned, and this development may certainly be spoken of as the people's progressive reaction upon the conflict of its life with the life which at least formally is foreign to it, that is, with the larger and fuller life of the natural environment, human and physical. Doubtless in such a standpoint there is much that is artificial, since any assumed point of view always makes for some artificiality. But it seems enough that the possible artificiality of this history is fully recognised and admitted. With special regard, however, to that sequence of attitudes or disciplines it should be recognised with particular candour that no sequence in time can ever tell the whole story of any history. Coexistence is an essential dimension of all whole history that *even* the professional historians often forget or shamefully neglect. Law, art, science, philosophy, and religion may indeed be found, as in this projected history, to be in temporal sequence, but they will be so only

relatively to the development of a particular situation or relationship. They should be observed also, all of them, as coexisting factors at any time in the people's life. Similarly, to use an old figure, those who occupy a particular place on the earth see the day and the night in sequence, but, if one regards the day and the night from the viewpoint of the sun, then are they significantly both coincident and in sequence.

The progressive story of the Human's "line of succession," one reign of which is to be described here, I have tried to indicate very concisely as follows: Law—Simple Assertion of the Human against the Natural; Art—Consequent Intrigue of the Human with the Natural; Science—Eventual Candour towards Nature and the Alliance with Utility; Philosophy—Liberation of the Spirit with Gift of the Human to the Natural; and Religion—After the Giving Getting. In the process thus indicated through five of its stages two movements, among the many that analysis can discover, may be spoken of here as of greatest importance, namely, the rise of an ever-widening relationship and outlook, politically and socially shown in an ever freer cosmopolitanism, and at the same time the realisation of an ever deeper and richer inner human life, shown in the growth of a deeply reflective consciousness, in a widespread individualism among men, and in the appearance of great personalities, of moral and religious leaders.

In this introductory note, finally, it remains only to give very brief summaries of the accounts of the two reigns preceding that of science. Thus, in their first reign, representing their first act of sophistication, the people made laws, so many positive statements of their developed customs, of their existing practice. Such formal statements, beginning a process of the rationalisation of their customs, showed human self-assertion and self-consciousness and confidence and conceit of action and not only secured more consistency and system in life but also made possible greater diversity or differentiation—division of labour, more distinct classes, and so on. The law, in short, served as a sort of medium of distribution and exchange. In operation, however, because of the increasing extent and complexity of life, the law gradually lost its rigor and both the might sustaining the law lost its brutality and the instincts controlled by the law lost their blind passion. Instead of positive law, therefore, something more pliant, the spirit rather than the form, assumed authority; might gave way to physical restraint of a more sympathetic sort, æsthetic in its appeal rather than arbitrary; and life came to be lived, not in an atmosphere of conformity or non-conformity, but in the much freer atmosphere of analogy or metaphor. Art, in other words, succeeded law.

In the second reign, that of art, although less rigorously loyal to their law and institutions, showing more licence and wider sympathy, the people were condescending and sentimental rather than candid towards what did not literally conform to their own positive ways.

Their characteristic expression, offensive or defensive, was through objects and ways—such as fine buildings, statues, manners, dress, the nice art of diplomacy—that (1) exhibited a freedom of form at once gracefully conservative of their own traditions and yet also by analogy or metaphor intelligible to people of other traditions; (2) possessed sense-values effective with all men; and (3) stimulated by interpreting their own new, freer, inner life which the lessened rigor of the law had brought them. Thus their life was still conserved and conservative; it was locally, that is nationally or racially, sensitive; but it was also in reality freer and broader and through its art and licence it was intriguing with what, whether without or within, was foreign to its own visible forms and institutions. But the inevitable result of such intrigue was still greater breadth and depth. Life even lost, or nearly lost, its local sensitiveness; it became so free and broad as to be locally insensitive, as to be rationally open and candid. In respect to its visible form, its language and institutions, its dress and manner, to all the media of its expression, it turned prosaic, conventionalised, utilitarian. Its characteristic attitudes were rationalistic, not æsthetic; its characteristic affairs were industrial and commercial, not military and romantic. Whereupon art was gathered to its fathers and science came to reign in art's stead.

In the history of the Humani the third reign, the reign of science, has been by common consent the most perplexing in the whole line of succession, and I shall certainly have difficulty in making my conception of it altogether clear for no other reason than that I am myself in much doubt not merely as to what to say but also as to what to think. Still by describing at some length several phases of the life of the time and by pointing out a certain easy misapprehension in regard to it I must hope to show at least its most general characteristics and its significant part in the Humani's history.

To begin with, I know nothing better to say of the new reign, nothing more accurately descriptive, than that in its various interests and activities double living was the rule. The real life was no longer on the surface. There was too much reserve and too much finesse for such simplicity. By suggesting that there was an alliance, however unconscious at first, of candour, that is, impersonal open-mindedness, with utility I have tried to indicate the nature of the duplicity. Thus not only does each of these allies imply indirection or mediation on its own account, but also the two seem incongruous with each other. The naturally or objectively true, demanded by candour, and the humanly useful, very much like theory and practice, have commonly been thought to be in serious if not hopeless conflict. Their alliance, then, seems

even unholy, and yet at this time on every side these extremes and others like them or incident to them were met together, being openly if not deliberately united and also, if I may put it so, living together almost if not quite without shame or any apparent unrest. It has been said here that sophistication with its finesse, its reserve and mediation, makes civilisation. Also plainly sophistication brings double living, and in those days of the reign of science, when the metaphors of life and their human sensitiveness were dead, sophistication stood up very straight, walking the streets with manifest ease and assurance, assuming an open mind towards all things and quietly and impersonally using what only recently had been so warmly cherished.

Men had come to know themselves and their world. Art was dead, having followed law to the grave; and after living under the law and then for so many years in art's freer and peculiarly invigorating atmosphere of analogy or metaphor and reaching finally an insight beyond the humanly centred art into the deeper harmonies of nature, the Humani had quite lost that last check on the freedom of the sophisticated life, sensitiveness about themselves, about their own ways and traditions. Latterly they had been very much like so many youths in their first evening clothes, but now they were become men of the world, well-dressed and unconscious; in an excellent manner, too, that to all appearances seemed correct or loyal, being socially and morally, politically and religiously, in proper form, but helped, not hindered by their fine manners in doing very much as they personally and naturally pleased. Moreover, in the whole gamut of human possibilities there was very little that they did not please. Surely such sophistication does bring extremes together: mere form and free life; the local established law and order as only a lifeless medium and world-wide and man-wide interest and action; correct dress and nature; in short, utility, meaning in general the acquired value of the medium¹ of all life's activities, and candour, meaning the openness of mind and will that characterised those activities.

The Humani seem to have "arrived"—with apologies for such a colloquialism. No longer sensitive or conscious, they displayed a bewildering versatility, being as fluent in action at large as in their now prosaic speech. In all their affairs they developed an agility and skill that suggests more than anything else the acrobat or gymnast who performs his intricate turnings and twistings at dizzy heights, seems at every

¹ The medium was become an instrument or utility.

moment to be certain to fall to fearful injury, and yet, except for the rare accident, at last lands on his feet, bowing and smiling complacently. Their skill or genius, which had been artistic and æsthetic, was become, in one word, maturely mechanical. At least that is what I think it should be called. I think that mature mechanical genius means just such things, the personal or human unconsciousness, the quick adaptability, the freedom from set or rigid law, from mere habit or tradition, and at the same time the ready compliance with the spirit or form of law and order. Mechanical genius belongs to action that proceeds from a free centre, that is facile as well as lawful, being able to use freely any manifested system, being lawful but not law-bound. To such freedom and the genius of it, to the subtle sophistication of it, had the process by which their original customs were being rationalised, and which had found its first expression in positive law and its second expression in art, now brought the people of this history.

And, although unconscious in the sense of being insensitive, the life of the Humani was very far from lacking interest. Indeed it had a zest, a new enthusiasm of pursuit, which I know not how to describe: strong without any evidence of impulse or passion, real and deep without any manifest assertion or expression. The zest of life that calmly and quietly understands, that is versatile and mechanically skilful, that is humanly at ease, is so different from that of a life that, however demonstrative and aggressive, is still conscious of itself, of its feelings and its manner. Perhaps with the Humani the new zest that came with their life of understanding, of humanly free insight into the harmonies of nature, showed itself best in the change in their dramatic sense, whether this appeared in literature or in the every-day life of the street. They still laughed and wept, but, so sophisticated were they, comedy lay now in the strange pleasantries of blind accident, tragedy in impersonal, wholly irrevocable destiny. Being unconscious themselves they were bound to regard nature, that is, the whole, with which their own special and partial life was ever coming in comic or tragic contrast, as no less so. Moreover a zest such as theirs, involving relations to a world of unfeeling accident or destiny, showed the spirit of adventure still alive but very different in quality. The increased sophistication of the people—and sophistication, as was said, must always imply adventure—had changed the sphere of human activity and of the uncertainties of human activity from one of all sorts of direct sensuous encounters, the contestants using sheer might at first and then art and art's

sensible graces, and of course being in either case often but not always successful, to one of encounters which should rather be called intellectual or rationalistic. The calm rational calculation of the latter, possible only when men had lost their earlier self-consciousness and also requiring no direct physical or sensuous contact, necessarily made life's adventures very different indeed from those of sense. The world had in fact changed from one of spirits, powers, conscious wills, to one of blind accident and unfeeling destiny, but think what the change implied as men went out in thought or act to meet that new world—the conviction of natural law that was implied and the explorations, always adventurous and never lacking in either humour or tragedy, in the realm of reason and law.

I cannot yet leave this subject of the zest and adventure of the time. To some people the association of adventure with reason and natural law will still seem strange. A highly intellectual creature, they will admit, might pretend to understand it, but many if not most men would be disposed to laugh at such seething ice. Can true adventure be anything but an affair of unexplored seas, magic forests, giants, dragons and like marvels? Adventure, I reply, is far more than any or all of those things and emphatically the new life of the Humani was proving it more. Of course, if one sees nothing more in it, then the Humani certainly had passed into a life of mere routine, insensitive, purposeless, unproductive. To its mere mechanical skill, its agility and fluency and versatility, reference has been made already. It had also a certain brilliancy; it was bewildering and kaleidoscopic; it showed great wisdom of method. Yet these things do not seem to save it. Moreover many who had part in it found fault with it, as if something from the past had been lost; and others since have lamented the seeming decline, asking the very questions, so it happens, that we often hear put to our own rationalistic times. Thus: Is life, then, to be henceforth humanly unproductive? Has it reached a point where it needs only to cultivate itself, where its mere activity is quite self-sufficient, its round of routine intrinsically rich? And, if so, why must this present life be in such sharp contrast with the past? In the glorious past human laws were made and positive institutions established in face of all sorts of hostile powers; territory was acquired and settled, the achievement leaving the people many a story of heroic encounter; handsome buildings, noble statues and beautiful pictures were produced, and fine dress and manners developed and assumed; but now there certainly are no such

aims and results, no things so humanly alive, as those. Men are travelling, it is true, and more widely than ever before, but even here life seems deadened, for it has a peculiar commonplaceness and no matter where men go they show themselves very much at home. Instead of seeking mysterious places and objects, rumoured treasures or dangerous foes among men or powers of nature, they are taking safe journeys to well-known places on errands wholly lacking in the old-time human interest or romance. Hear what an unknown modern rhymster says of it all, speaking of course for his own time and people:—

“They roam the woods, they climb the hills;
They seek strange towns and streets:
The towns reveal old friends; the woods,
Imported houses—canned meats.”

Is this new life, then, only routine? Is there no chance for real adventure? The answer is very easy. Under the old tests, no chance at all. Accordingly under the old tests those among the Humani who questioned and complained were quite right. It was and is, however, such a serious mistake to judge the life of humanly insensitive reason by the tests of sense. Why expect the aims and products of a rational life to be such directly and immediately human things as living institutions, beautiful buildings, graceful manners? Look rather for such things as will accord with reason's reserve and indirection, things that are not human or are only mechanically mediate to human life, such as prosaic, even deadly prosaic literature, formal plans and abstract theories wholly devoid of human feeling, methods that are strict and business-like, accurately measurable pecuniary wealth, and machinery—nowadays referred to as “our modern machinery”. In the production and use of these things the Humani had no lack of interest and adventure. If, as I suspect, their heart-beats were become more regular or uniform, it was not from any lack of excitement but from the strain and the deliberation of the orderly self-control which their mechanical genius and its deeply adventurous routine required. When animals become domesticated and turn free and playful in their ways, chasing their own tails perhaps, there may be little if any adventure in it all, but when men, becoming sophisticated, do so, the adventure of their free routine is tremendous. It is as different from that of the olden times as the dashing brook on a mountain side from the slow, steady, powerful river in the plains.

Wholly natural was it that with the changes in their interest and adventure the people became, not sentimentally,

but quite openly and practically cosmopolitan. This means not merely that they developed positive interests of all sorts with all peoples in their known world and that foreign merchants and promoters, labourers and artisans, teachers and thinkers, frequented their cities, but also their own inner life openly related itself to all sides of human nature. There was, in other words, an inner or intensive as well as an outer cosmopolitanism. All men and the whole man were contemporary concerns of life. Conventionally, it is true and is also very important to remember, the people still held to their traditional law and order, so that the old distinction of civilised *Humani* and uncivilised foreigner or of human and natural still had vogue, but without the old time prejudice. Simply the people still held to their old ways, not with any special feeling for them, but to recall a phrase already used, because these provided a working standpoint, a practical basis, for exploitation of their cosmopolitan life. At the same time conventional distinctions are not by any means empty distinctions, for although showing the passing of differences of one kind, they only induce differences of another, making the conflicts among peoples or communities, like the adventures of life in general, affairs of reason, no longer affairs of sense and might; in other words, making the conflicts industrial, not military; mediated, not open and direct.

Besides such practical cosmopolitanism there was, as but one more evidence of the double living, of the paradoxical character, of the life of the time, the persisting tendency, shown as early as the great wars, to develop a racial superiority and leadership in a single city. To say nothing of the successes in the wars, the greatest achievements in art had been so centred, being the work mainly of one community or at least of individuals who, when not native, had come to, or at least looked to the centre, where the atmosphere was most favourable. Art had demanded this centralisation, and now with the new reign the need, if fact ever be an indication of need, was still greater. So with the growing and freer cosmopolitanism there was a more pronounced centralisation; in history, as elsewhere, centripetal and centrifugal forces were working together; and this was the more remarkable in view of the circumstance already dwelt upon, that, at least so far as sense-values, I mean the values of mere local sensitiveness, were involved, old distinctions were become only formal or conventional. However dressed, under whatever government born, men were all men. But although local sensitiveness no longer separated them, never-

theless the Humani, widely cosmopolitan, were identified in their own minds, if not in the minds of others, with the most civilised and in so far the most exclusive city in the world. The life of an insensitive reason seems to have replaced the old distinctions, which had become formal and superficial, with the new.

But I can say no more here in general characterisation of the reign of science. The life, we have seen, had acquired mechanical genius. Then, at least outwardly, with all its agility and fluency, it was prosy, insensitive, purposeless. Yet those who see in it only aimless routine are blind to the real life. The real life had, and for those who look through the right glasses, under the right tests, it shows great zest. It was richly productive, too, as well as purposive, but with the natural products of a rational life, a life of reserve and mediation, a life mechanically skilful. And to all else it added a wholly practical although very centrally localised cosmopolitanism. But now, such being the general life of the time, we have to observe two things of very special importance. In the mental life the peculiar genius of the Humani found expression through the rise of natural science; in the life of affairs, through commerce and industry. From having been artistic and æsthetic the people became scientific. From having been zealously and sensitively civic and political they became individualistic and commercial. Both of these changes must now be explained carefully.

When I say that the people became scientific I refer primarily to the interest and attitude of science, secondarily to the technique, although the technique was quick to develop with the assertion of interest. Simply, as an intimate part of all that we have seen of the life, the Humani were become mentally free, candid and actively curious. In the first place, their literary language was now prose, and more than this, as was shown, their institutional life as a whole was turned prosaic, being valued no longer immediately, but mediately. And then, as of greatest importance here and as calling for most careful reflection, whether expressed in language or in the institutions, the prosaic medium of life, although representing and preserving as it did a highly organised experience from the past, was evidence that the real interest of the time was not in the medium itself but in what lay beyond it. With that prosaic medium, in other words, man's regard was outward. It was also upon a world that was external or objective, and in its observations and reasoning it was held to just such rigid and formal methods as the prosaic medium, still preserving however insensitively the old law

and order and so at least formally conservative as well as prosaic, necessarily imposed. Reason, however, so constrained, that is, candidly observing and describing an external world and held to methods that were but the dried and conventionalised customs and laws of the past, was science—as it happens, a paradox also of our own time—the formally conservative interest in an external world with prosaic report of what is found there.

But the two words, prosaic and conservative, are easily misunderstood here. Prosaic as that organised life had become, there was preparing, if not already present, a vision with which the poetry and metaphor of former days could not be compared, which only the prosaic manner of the time could have made possible and which must have contributed largely to life's interest and effort. Let me put a simple question: Which shows the farther or deeper vision, the humanly sensitive metaphor of poetry or the dead medium of prose? The former may vaguely feel something beyond its view, but its view, outward and inward, is obscured and confined by all the colours of its metaphor. The latter shows the veil or the chromatic mists of metaphor removed and consciously and openly regards a world that is not humanly illuminated or fashioned and that is superior to and beyond or beneath any human form or law. Again, prose, which embodies the law and order of life and shows this no longer a thesis to be maintained but only a working standpoint or instrument from which or by which men may look wholly out—or wholly in—upon things as they naturally are, opens to view the visions of the mind's eye, serving the thinker's in distinction from the sensitive poet's imagination. Prose, then, truly is the farther and deeper vision. Indeed with its rise in their life men are as if forced to say in so many words: "Now must we see beyond the vision of our eyes".

Vision of the invisible indeed! Do science and its prosaic medium mean that? The formally conservative view of what is outside and so certainly cannot conform! Can poetry ever equal that? How even prose must labour! How certainly the mind so strained must actually consent to inconsistency and what freedom and interest it must feel with inconsistency sanctioned in such a cause! Tip-toeing, when all the measurements are against you, to look over the fence and to see clearly what lies there, or using the senses to see a world of reason, this is science and prose, and it reveals to us once more that among the Humani at least in

their mental life adventure certainly was not dead. Nor was humour. Said one of their contemporary writers:¹

"Queer creatures men who strive and strain
For sight of what not one may view:
They say they know they strive in vain;
Yet, 'though they die, they strain anew.
I wonder if it can be true
That, blinded, they'd improve their sight;
I wonder—would I really knew—
If darkness be the brighter light."

Strange to say the time when those lines were written came to be known as "The Age of the Illumination". All the lights, however, were artificial. In their candour, their impersonal open-mindedness, and their sophistication men no longer trusted their vision or their own biased senses generally. Mechanically skilful as they were, they devised instruments of all sorts, and by use of these made nature, as it were, do their perceiving and valuing for them. They insisted on accurate, objective standards and measurements, popularly and professionally resorting thus to mathematics as the sovereign over all their judgments or as a sort of conventionalised, purified and de-humanised legal order. In short, in all the matters of human perception a most subtle indirection, making for objectivity and exactness, was the rule. Men did not themselves see, yet saw as never before—in artificial ways, under an artificial light. They looked closely, but not at what they themselves had ever seen. So was their prosaic life not poetic, but superpoetic. In prose the thought or vision always transcends the medium.

As for the conservatism of the time, the only formal conservatism, this also calls for some explanation. It was so formal, or conventional, that the inevitably negative results of the outward regard of the scientific candour of the day lost much if not all of their sting. These results could not but be negative, because the life and nature that lay outside simply could not conform. The Humanist's prosaic life and its candour led them to inquire if this or that thing really were or were not true, if the Gods of their fathers did or did not exist, if the laws and institutions of their race did or did not have real warrant, and also bade them, so inquiring, to look without bias at all things as they naturally were, and in every instance the finding was and had to be negative. Nature refused to reveal what men seemed to be asking of her. The case was like that of the man, so often

¹ The translation is from the Humanish.

referred to, who swept both the mountain tops and the higher heavens with his telescope looking for the God of his ancestors and reported no God there. When conservatism is formal, however, when traditions have become mere conventions or mere standpoints or instruments, nicely developed and refined, of investigation, and above all when values have changed—from the immediate values of sense, for example, to the mediate values of reason, those negative results both are foregone conclusions, being in fact quite true to the real if not to the apparent life of the observers, and cannot have much sting.

Of course conservatism, however formal and prosaic, was a necessary condition of the scientific attitude. Stability of conditions was necessary for the objectivity and for the measurements, the accuracy and precision, required. The scientific mind, whether we think of it as belonging to the general consciousness of the people or as belonging to some highly trained expert, was in one respect like the mind of business, even of common commercial enterprise; it required that the established order remain, insensitive perhaps, but in any event intact; it was not and could not be patient with anything that disturbed the integrity or stability, sometimes known as the credit, of the country. Lumber-wagons or war-chariots must not pass too near the scientist's work-room. He himself must be free from military service. Revolution and all like incommunities may or may not go well with philosophy, but science must have quiet. Radical in its results as well as in its asserted objective interest and in the real life that lay beneath its prose and its candour and its yes-or-no questions of mere fact, it still could not break with the past. Materially radical, formally it was still loyal. Somebody has said that the past is a club with which the future—sometimes called Hercules?—knocks over the present. The saying is a good one, although a bit mysterious and fantastic, and in the days of their only formally conservative science the Humani had that club well in hand but could not or at least did not swing it.

With their science, which was, as just said, formally conservative but materially radical or negative, the Humani acquired an external world which was for them mechanical or—in a special but familiar sense—physical,¹ and at risk of seeming to digress I would speak briefly of this. Of course the idea of unfeeling accident and destiny has already sug-

¹The special sense is of course indicated in the phrase "physical sciences" applied to chemistry and physics and calling for quantitative differences and relations, for mathematical explanations.

gested to us a purely physical character for the external world, but I must call attention now to the special matter of acquisition. Most people think of the outer world as having always been what it is for them. Others who have gone before are supposed to have had false ideas of it, to have been abnormal in their judgments, to have needed "modern" enlightenment. In such a view, however, there is a serious fallacy, for the so-called external world is neither fixed in character nor external in the way supposed. Men grow and their world grows with them. Possessed with spirits and magic at one time it may be physical at another, and whatever it is at any time it is by their acquisition. There is always, in other words, a noble companionship of men with the external world. It is, for example, physical or mechanical, a world of unfeeling accident or destiny, only when men have become freely rational and, in general, through what must seem essentially moral, and just they and their world are always meeting on equal terms, the world being a good sportsman in that it refuses to take any one not of its own size. No child has a physical world and no savage has or ever had one. So, as to the Humani, they had grown to a certain estate and their world was become physical.

And I have mentioned the acquisition of a physical world for a very special reason. Such a world, I feel sure, supplied the ideal atmosphere, the perfect *milieu*, for the peculiar freedom and especially for the personal individualism to which the Humani had come and upon which both their practical affairs and their scientific interests certainly depended. It is quite true that a physical world means law, natural law, and that natural law very commonly has been thought opposed to human freedom, but this common notion must be wrong. The facts wholly belie it. Among the Humani, rational beings as they were with a physical, mechanical world, individual initiative was general, conspicuously confident, and surprisingly various and diverse in its thoughts and acts; nor can I myself see anything at all to wonder at in this fact. If the people had not themselves grown to that world, if they had not acquired it, the case had certainly been very different, but they had acquired it and, among other things, in its acquisition they had gained, as we know, the skill of indirection, the power of distinguishing between means and end, which their sophistication had brought. So in relation to a mechanical world—and it was their world—they had such skill or power, implying, if I must repeat, mediation, reserve, calm finesse, and with this power, just because of it, not in spite of it, their world being physical.

the opportunity for the individual was unlimited. Was not the case like what we see in the use of language? The more prosaic a language is, the more it is merely a medium of expression, the more is it only at once a medium and a distributor of different opinions. Prosaic routine, whether that of language or that of a physical world, has always made individuals, assertive, confident, and surprisingly different individuals, and this fact, obviously making its own special contribution to the quality of life and especially, as I can only suggest, to the social consciousness, to the relations among individuals as they meet and act and react on each other, is by no means the least of many things which must be kept clearly in mind by those who would understand either the intellectual or the practical life of the Humani in their third reign. How skilful they were in all their encounters, intellectual, social or occupational! They seemed like mind-readers, in idle conversation or serious argument responding with marvellous acumen to the slightest hints of word or gesture. If they possessed great reserve, they were also for ever battling to uncover each other's defences and disguises, and this skill, besides aiding tremendously their study and understanding of a not less subtle nature, throws additional light on the great zest which their life had. Says one writer, discussing just this in their life: "With instruments of observation and exact measurement they studied nature coldly and objectively and, meeting personally, they showed the same reserve and calculation and the same insight, and although they have been called unfeeling, unsocial, lacking in personal devotions, rationalistic, there was truly a most absorbing interest in what they were doing, and with all their undemonstrativeness they really were not unsocial nor only selfishly social but were personally dependent on each other. Their rationalism changed their expression greatly; it gave rise to their so-called individualism; but it impaired neither their interest in life at large nor their interest in each other. In fact both of these interests were probably greatly enhanced. *The social attitudes and methods in a life of liberated reason may be sui generis, but they are genuine.*¹"

Besides becoming scientific, the Humani became also commercial. To repeat from above: "From having been zealously and sensitively civic and political (in their life of affairs) they became individualistic and commercial". As was said also, although at the time quite incidentally, science and commerce have this in common, that both must always

¹ Italics mine.

be impatient with anything affecting the credit of the country. For both the established order of things must be insensitive but also remain intact. For both, once more, the established order was a means or instrument, not an end, and, using the means thus at hand, both exploited the natural world rationally or with accurate calculation, showing reason unhampered by sense. Commerce as well as science with the Humani, as with other peoples, was thus prosaically rationalistic and "objective," and its characteristic interest and activities were conducted with indirection and mediation.

✓ The prosaic medium of the Humani's commerce took many forms. From the standpoint of labour there was a great saving of direct human activity by the invention of all sorts of machinery. Nature was thus made the agent of man's practical life, and, relieved in this way, man was able to turn his energies to the tasks of careful direction and management in place of those of immediate production. The result in efficiency it is not necessary for me to dwell upon. Then, as essential to the new tasks, there were business methods, accounts, cold calculation, absence of soul ; all showing very plainly the rationalism of commerce. Nothing, however, appears to me to have been more significant than the change that came about in the notion of property and its valuation. Primarily all forms of property, besides being consciously and legally owned by individuals, came to be centred in one thing, this being, so far as possible, standardised and dehumanised, that is, rendered undesirable by men for its own sake, being, namely, only a medium of valuation and equitable exchange and being carefully defined as such a medium and, to comprehend everything by mentioning extremes, neither good as an article of food nor sacred among objects of religious interest. Such then was the change made in the form and valuation of property, and not the life of reason itself, now so open and free, nor the use of machinery, that has ever had its fascination for men, was more manifestly stimulating or had greater part in the zest or subtlety, the agile human interchange or the world-wide human interest and sympathy of the people than this prosaic medium of commerce, the monetary standard of the realm. In it as a common interest and a common measure, an object of reason, not of sense, all the manifold desires of men found a meeting-place and—for so it would have to be also—a distributing centre. Prosaic itself, humanly dead, it nevertheless, like the mechanical nature that so aided in its accumulation, was potential with every human passion, high or low, and became for every individual and for society as a

whole a focus of all the competing elements of human nature, and the almost universal pursuit of it or conscious dependence upon it affords only additional evidence of the finesse and sophistication to which men had attained. Wanting many things, but openly always seeking one; being, as one writer defined him, "a money-getting machine," although at the same time, however reservedly, his life was constantly and deeply stirred with hunger and love, political ambition and social longing, intellectual interest and religious fervour, man in his commercial and industrial life exhibited a capacity of rational intrigue and indirection, a condition of double living that was equalled by nothing in his career up to this time unless by the scientific ingenuity which was contemporary with it. He showed, too, a knowledge of himself and a consequent facility in meeting other men and competing with them that also can have had its equal only in the brilliant social and intellectual encounters to which reference has been made already.

And if commerce was thus like science and so was properly contemporary with science in being rationalistic and only formally and prosaically conservative and in being so skilfully indirect, it was like science and contemporary with it also in its calculating exploitation of everything human and natural, of everything near to human life and foreign. There was, I think, a very general situation exemplified in the notable fact that often following the armies which still went forth on one campaign and another there were both men of science or their representatives collecting material for scientific studies and men of commerce seeking in the various regions traversed, even in the land of the enemy, a market for their wares. Of course there were expeditions, scientific and commercial, in times of peace, but this insistence of both even during war was significant. Moreover the wars themselves were in most part for commercial and industrial rights, not for mere conquest, and their conduct was under restraints that sought to protect commercial interests as much as possible and that recognised also the exemption of science, or of intellectual life generally, from military entanglements. In its extreme form the restraint of open wars took the form of a demand for universal peace. Often the demand was only negative, being antimilitaristic and sentimentally humanitarian, but there is good evidence for believing that something more positive and substantial than this lay behind the polemics and the sentiment. By suppressing military contests, referred to above as contests of sense and sheer might, there would be

increased opportunity, not for the doubtful blessing of mere sentimental, heavenly peace, but for free industrial competition, for the contests of reason and mechanical skill. The latter may not go forth for carnage and destruction, but somehow peace does not seem to me to be an adequate description of them. But I was saying, in so many words, that commerce was as objective in its exploitations of the outer world as science. Like science commerce depended on the standing organisation of life and society, but used this organisation in activities that were world-wide. The mention of war and militarism was only incidental to the explanation of this fact.

To sum up very briefly at this point, in their third reign the Humani were openly and freely rationalistic. The scientific spirit controlled their intellectual; the commercial, their practical life. Thus candour and utility truly were allied, although undoubtedly at first the alliance was a natural condition rather than a conscious intent, the two being incidents of the same general situation but not at once nor even for many years deliberately associated. That their deliberate association was sure to come in the fullness of time and that, all the more because based on a natural condition, it would bring momentous consequences must go without saying; but, before pointing out what those consequences were, how they even brought the reign of science to its close, I must call attention to one or two other things of considerable importance. With the change from art to science, from sensitive civic life to commerce, from a still substantial to an only formal conservatism, from a more or less sentimental to a freely rationalistic cosmopolitanism, with this change the status both of the ordinary foreigner in the city and of that other foreigner, the citizen, whose interests when not openly then privately were now really outside of State and law, was very materially modified. Foreign merchants and foreign scholars were constantly present in force and were treated with marked respect, or, to say the least, they secured good prices or salaries. Breakers of the law more often paid fines than suffered open and personal or bodily punishment and not infrequently they escaped punishment altogether. Even in treaties between rival communities or with foreign races indemnities generally took the place of cessions of people and territory. In short, for those without the law and for those at least nominally within it rational and commercial calculation was the rule. Men met even all offences, not with blows nor any longer with obvious however nicely controlled anger or resentment, but, to speak somewhat figuratively to the

general situation as well as literally to many specific cases, with nicely calculated bills of damages, which were or were not paid according to the way in which the facile machinations of the contemporary law happened to turn. In short, the new status showed the life of all, let us say of the foreigners abroad and of those at home, largely if not wholly "commercialised". The law was commercialised. Even morality seemed so, in that personal relations and services all had their prices. Human association was commercialised, as was shown in the decline of individual enterprises and the rise of what in our time have been known as "soulless corporations". Still, not to enlarge upon this result of the rationalism of the time, it undoubtedly implied progress, for it had come about only through a widening and deepening of human interest and action; it contained rich opportunities of large and vital human achievement, for it showed reason superior to sense and mediation to immediacy in expression; but, as always with progress and achievement, there was cost. With all the hopes of the time, all the opportunity and, I do not hesitate to say, all the certainty of achievement, greed, corruption, inhumanity were conspicuous in every department of life. Certainly the conflicts of reason and mechanical skill involved much disaster. The battle-fields were strewn, not indeed with bodies and their decay, but with characters no less malodorous. Yet possibly there may have been at least as much merit in falling in these battles as in those others.

But it must not be forgotten that side by side with the rationalism, theoretical or practical, and with the hard, subtle, vital conflicts which this fostered there was a newly assertive religious life. At least one historian, I know, has written of the Humani at this time as an unemotional people, declaring that their reason and calculation had wholly supplanted their former emotionalism. Such a view, however, is superficial and laughable. Apart from the real although undemonstrative interest and zest of which much has been said here, there was positive emotional expression in what in general should be called an assertive religious mysticism. This mysticism had several ways of showing itself. Sometimes men turned from the accepted religious rites and beliefs to nature and then the attitude was pantheistic. Sometimes in a reactionary spirit they revived and reasserted the traditional symbols and rites and, passionately pressing these, as it were, close to their very hearts, seemed to lose themselves wholly in the life of Him they worshipped. And sometimes, without any conscious resort to nature and yet with insistence

that old forms only hindered man's approach to God, they declared themselves as feeling God's immediate presence. Still, whichever of these or of certain other forms the mysticism took, the result was always unorthodox and in certain quarters was as much decried as rationalism itself. Was not the individual taking his religion into his own hands? And, for the rest, the general movement, although outwardly seeming to affect relatively small portions of society, really showed how emotionally real the whole life of the time was and how the emotions of it, human experience being deepened with the passion of all nature, at times simply had to come to the surface.

Now to return to the central fact of this chapter, to the alliance of candour and utility, of science and commerce, although at first this was, as said, natural rather than conscious and deliberate, it was bound to become conscious. If nothing else, at least what the novelists have called propinquity would take care of that, sooner or later awakening direct interest of each in the other; and a conscious alliance of candour and utility quickly made certain a change of reign if not open revolution, being fatal at once to objective rationalistic science and to commercial stability and calculation and in general hopelessly unsettling every form of reserved and conservative exploitation. The reign of science, although enduring many years, was thus as transitional as either of the two earlier reigns had been. Under what conditions, however, the final change came about must now be explained carefully. The romantic metaphor which I just allowed myself may have been entertaining, but it has not made all things plain.

We have found that the Humani were still, but in a certain prosaic way, conservative. Both their science and their commerce have been seen to have required that the existing organisation of society, although no longer an object of sensitive concern, remain intact. Yet in all those things of which the life of a society is made, religion, morals, politics, industry and hygiene, their candid science was constantly getting results which, if applied, would call for startling changes, and their commerce, although based on utility, was in point of fact not yet really and freely using or spending the life and the instruments and treasures of all sorts which the past had given. The situation, then, distinctly was an unstable one, for, hard as it always is for a people—as well also as for an individual—to release for free, full use what life has put in hand, sooner or later the conservatism has to yield. *Sooner or later among the*

Humani the larger candour of unhesitating application and the freer use of uncalculating expenditure had to come. The people outgrew even their prosaic loyalty to the past and lost themselves or found themselves—which should I say?—in a general humanity that seemed to know no country and no traditions, no boundaries of life narrower than those of nature.

May I put this a little differently, using another metaphor? In the peculiar conservatism of the Humani during their reign of science, whether we see it in the only objective candour of their science itself or in the special reserve of their commerce, there was a certain suggestion of the miser who hoards what is meant, and sometime in the future is sure, to be spent or used freely. Whatever future history may have in store, in the past no people has ever worked and built for itself alone. It seems natural, too, for any people in due time to become rationalistic, commercial, utilitarian, exactly as was the case with the Humani. Even so, however, they are still living for themselves and therefore are miserly. Nor in calling an age of science or commercial utilitarianism miserly would I imply only opprobrium. That miserly conservatism coupled as it was with the notion that science or intellectualism generally was a life by itself and that commerce on its side was the mere selfish exploitation of all available resources, not a naturally free and adequate development of them, had a certain real value, since undoubtedly new and radical ideas should not affect life until most carefully worked out and the various resources, moral and intellectual, available in a people's life should not be released or appropriated by man or by history for free use until thoroughly elaborated and tested. *Persona non grata* as the miser is, his planning without acting, his mere hoarding of the means by which he might carry out his plans, and his self-centred zest over his treasure, over its glitter and its ring, are only morbid and exaggerated expressions of things in general life that do possess undoubted worth; of such things, for example, as looking before leaping, cultivating and accumulating before using, and knowing the value of what you have before you really release it for use. Wherefore, although their conservatism was suggestive of the miser, although greed and corruption, not to say also other offensive marks of the miser's morbid condition, were much in evidence, although in what above was called their free rich routine or in their bold indifference to accident or destiny they seemed to be looking even without any thought of ever leaping forward and cultivating and accumulating even

without any impulses to freer and more vital use, nevertheless that conservatism of the Humani served a true purpose. In its staid, eminently respectable intellectualism and its equally well-controlled utilitarianism there was a great training of mind and preparation of resources for wider and fuller life. But of course the long check upon the forward movement had finally to give way. No miser can live for ever. After his death candour and utility do face each other. New ideas are put into action. Developed utilities are made, no longer the medium of routine, but the means to new life. And so it was with the Humani, their miserly conservatism passing.

As it passed, as the prosaic letter of their life no longer restrained them, the spirit, always so much larger and deeper than the letter, was liberated. Realisation or liberation of the spirit is indeed probably the best way in which to describe the change that marked the conscious alliance of candour and utility and that brought a new reign to the Humani. The liberated spirit could accept the negative results of science, as the letter, the old law and order, could not, and the liberated spirit could also relinquish to free use, to natural or universal instead of to locally human use, to use without conservative calculation, all the accumulated powers and treasures of the people. The liberated spirit, also, could finally break down, not merely the distinction between the Humani and nature, but also the traditional barriers between the Humani and other people. Whence there came no condescending cosmopolitanism, like that in the days of art, nor yet any candid but calculating local interest in the world at large, like that in the days of science, but a life that was itself world-wide and a thought that was too open-minded to be only objective and exact.

Art, it will be remembered, had to see its own peculiar interest, the beauty of its human works, so sensitive with human life, lost—or fulfilled?—in something larger, in the freer beauty of nature, its humanly centred productions becoming only incidents in a whole that was alive with the sensitive metaphors of any centre or of a wide and free centre—how did we put it?—and now, but on a different plane, on the plane of reason instead of sense, science was brought to a similar experience and to the tragedy of such an experience. Science's regard for the objectively, outwardly true had to give way to regard for the naturally and essentially true, for the true without the manifest restraints of an outward objectivity and inner reserve. And, sympathetically, commerce had to give way to something very like abandon.

In a word, to conclude, the Humani turned, no longer conservative and objective, but speculative; in thought, philosophical; in affairs, open-handed; becoming in thought or act spenders of civilisation, not mere thrifty savers of it. They were almost naked, too, and natural; no longer, except for the thinnest of covering, clothed or disguised. Indeed they were very near to being a people without a country, lacking any visible religion, government, social ties or any of the usual formal restraints of life. And yet, with all that they were losing or sacrificing, they had won or soon were to win far more, or at least the chance of far more, by the change, and there can be no doubt that their past with its law and its art and its science and with the active life which these had presided over had schooled and trained them well for the new trials which were now before them and which must be met before the greater chance opened to them could be seized successfully.

Still, as the change put philosophy at the head in place of science, the account of what came of it must wait for another time.

III.—PERCEPTION AND INTERSUBJECTIVE INTERCOURSE.

BY WILLIAM W. CARLILE

"THE common world," says Schelling, "arises by the co-operation of many intelligences". The remark embodies a conception which, unless I am much mistaken, has a great future before it in philosophy. It is that of the transformation that the immediate presentations to the minds of individuals undergo at the touch of intercourse with their fellows. The fact of the transformation has been dwelt on by Dr. Ward in the sixteenth and seventeenth of his earlier Gifford Lectures published under the title of *Naturalism and Agnosticism*. I find his reasoning put in a compendious form well suited for quotation by his reviewer in the *Hibbert Journal*,¹ Dr. Dawes Hicks.

After remarking that within the circle of purely individual experience there emerges no distinction between the real and the phenomenal, the writer goes on to say: "That distinction only comes to have significance when the advance is made from the point of view of individual experience to that of universal experience. When ten men look at the sun or moon, they all, according to Reid, see the same individual objects, whilst according to Hamilton, each of the ten sees a different object. From the standpoint of individual experience Hamilton is right; from the standpoint of universal experience the truth lies with Reid. The transition from the 'immediate' object of individual experience to the 'mediate' object of universal experience is effected mainly through means of intersubjective intercourse, and the various operations to which intersubjective intercourse gives rise. The common knowledge which results is, in reality, a continuation and extension of individual knowledge, but so far as the theoretical knowledge of Nature is concerned, intersubjective intercourse leads, inevitably it may be said, to the omission of that reference to a knowing subject characteristic of the

¹ October, 1905, p. 197.

objects of individual knowledge. The *one* sun which is the common object of ten men looking at it, since it is not the peculiar object of *any one* of the ten, comes to be considered as independent of them all collectively, and of consciousness generally. From this fallacy of naïve realism to the dualism of matter and mind the step is not great, the mediate object comes to be conceived as a thing in itself, that produces by its action the percepts of individual experience, and the latter are falsely pictured as being subjective modifications of the individual mind."

But is there any fallacy whatever about the reasoning here described as that of naïve realism, one cannot help asking with all due deference to so sound and so eminent an authority as Dr. Ward. He likens it to an argument to the effect that a collective body such as the House of Commons might be held to exist even though we suppose each and all of its members non-existent. It is impossible to concede the validity of such an analogy. The fact that causation must be taken account of puts it into another category altogether. The discovery by myself, say, of the simple fact that the sun, or any other outward object, exists for my neighbours in my absence is at any rate one of the facts which operate in taking the presentation out of the temporal flux of ideas and in giving it a place among the things, objects, or substances of the world, which, in a word, convert the feeling into the thing felt.¹ Is there any fallacy, we may ask, in the primitive conclusion of dawning consciousness that an impression known to be the same for me and for my neighbours is an impression caused by something that is still there when both I myself and any number that we please of those neighbours may be supposed as absent, asleep or dead? Or, again, is there any fallacy in asserting that this last conclusion tends to the establishment of the fact that such an impression is not the creation of my own mind working in solitude, but, on the contrary, is something that somehow or other stands apart from it and is independent of it altogether.

When Mill, clinging to his conception of the outward object as "a possibility of sensation," yet has to concede that we must recognise the fact that one possibility of sensation, which we call fire, can, in our absence, melt another possibility of sensation which we call wax, does not the thought

¹ Prof. Stout thinks with Berkeley that "the explanation of the fact that the presentation continuum of the individual is continued beyond itself into a whole of fundamentally like nature which transcends and includes it" is "that presentations which do not exist in my mind exist in other minds" (MIND, N.S., 77, p. 13).

force itself upon our minds that the game is up, as far, at any rate, as his variety of idealism is concerned; and that he, under cover of the clumsy synonym "a possibility of sensation," has really conceded the existence of all that any of us ever meant or mean by the object of the outward world.

Leaving on one side, however, for the moment, the general controversy between realism and idealism, that which it is worth while especially to call attention to at present is the transformation, so clearly realised by Dr. Ward, and Dr. Hicks, that takes place in impressions under the influence of intercourse. Even here, however, one finds some features of the statement to which it seems necessary to demur. We are told that, from one point of view, Reid is in the right, from another Hamilton is in the right also. Reid thinks, as we all do, when we are not philosophising, that ten of us looking at the sun see the same sun, Hamilton thinks, on the contrary, that all of us see a different sun. He goes indeed farther than this and thinks that what we see is not the sun at all but only his image on the retina. Now, of course, the image on the retina—or rather the pair of inverted images—is something that science alone knows anything about, and to say that it is what we 'see' is to put a wholly impossible meaning on to that common word. The truth is that the transformation of impressions into objects takes place at an earlier stage in mental development than either Sir William Hamilton or Dr. Ward has realised. Dr. Ward places Hamilton's product of individual experience and Reid's product of what is described as universal experience side by side as things equally real and tangible. But the truth is that Hamilton's is something that cannot be said to exist for consciousness at all. The colour presentations of vision pure and simple have been already converted into the things seen before the stage of consciousness is reached. Hamilton's view thus does not appear to have any vestige of validity about it whatever.

Dr. Ward looks like getting to the root of the matter when he puts the case thus: "The question (that of the transformation of Hamilton's ten suns into Reid's one sun) naturally presents itself in the form: How does the one sun become an object to ten different men? Yet the proper form rather is—'How and in what sense, do the ten come to know that the actual object of each is the same individual object for all?'" To put such a question rightly is indeed half the battle. It leaves, however, the other half yet to be fought out.

Protagoras, it appears, was the first to grasp the fact that

"When several individuals perceive the same external object each has his own sense presentations, which as such are incommunicable to the others".¹ If they remained, however, from first to last always and altogether incommunicable to others, that is to say, if there were nothing that compelled unquestioning agreement between any two of us as to whether the thing that we were at a given moment speaking about and looking at was in very truth the same thing or not for both of us, if what we may call the intersubjective identification of the things of the outward world were definitely and finally impossible, then, we may ask, how would anything in the nature of objective knowledge be possible at all. None of us really doubt, as James says, that when we are looking at the sun it is the same sun that we all of us see. Whence, however, comes this certainty? How, in other words, is intersubjective identification possible?

Dr. Ward, so far as I have been able to discover, does not attempt an explicit answer to his own question, but contents himself with pointing out the difficulty or impossibility of giving a fully adequate one. To formulate a fully adequate answer may indeed be difficult. At the same time I think that some suggestions are possible that give us a glimpse of the direction in which such an answer is to be looked for.

"Our first investigation into the nature of reality might properly take the form of inquiring, What is it that happens when we first learn the signification of the word 'Real' (say as applied to this pen that I hold in my hand)? In the first place it is plain that there must be intercourse. The solipsist standpoint is wholly inadmissible. The sensations of an isolated being would never emerge into consciousness at all. Certainly they would never have names given to them. As to the nature of the intercourse in this particular case there is at any rate this much that happens. There is a group of muscular and tactual sensations peculiar to me, as I grasp the pen in my fingers, accompanied by an auditory sensation simultaneous for both of us as I say the word 'Real'; then a group of muscular and tactual sensations peculiar to you, and an auditory sensation common to both of us and recognised to be similar to the former auditory sensation, as you take the pen in your fingers and repeat the word to show that you understand and concur. The nature of the muscular and tactual sensations have been perhaps adequately analysed by experimental psychologists. I do not think, however, that this important difference between them and

¹ Prof. Stout, *Proceedings of the Aristotelian Society*, 1908-9, p. 238.

the auditory sensation has been explicitly pointed out, *viz.*, that whereas such sensations as the auditory one are open to the experience of an indefinite number of people at once, the muscular and tactual are confined to the experience of one at a time. You cannot hold the pen while I hold it—the same part of it at any rate—without displacing me. This fact is, I think, the foundation of the distinction between the primary and the secondary qualities of matter. It is that which subsequently becomes elaborated into the thought that two bodies cannot occupy the same space at the same time. On it is based the very possibility of the denotation of words, of pointing out anything. The ultimate meaning of the words, ‘The same thing as between you and me,’ is ‘The thing that I now lay my finger on, and that you cannot lay yours on without displacing mine.’ If you could, your finger would occupy the same space that mine occupied at the same time. As vision is a compound of muscular and colour sensations, it holds, in respect of this peculiarity, an intermediate position. I can see a face without displacing you, but not a face strictly in profile while you see it strictly in profile. As a result of this, pointing out, as a means of indicating, comes to be substituted for touching.”

The last paragraph, I may remark, is reproduced from an article of my own in *MIND* of January, 1895, some seventeen years ago now. The portion of it that is especially in point in connexion with the present question is of course the contention that the ultimate meaning of the words “The same thing” as between you and me is “The thing that I now lay my hand on, and that you cannot lay yours on without displacing mine”. Some view more or less similar to this was evidently running in Lotze’s mind when he points to the ultimate contrast between inner states and material things, as lying in the fact that the former cannot like the latter “be separated from their original possessor and passed on as they are from hand to hand” while material things are, in the last resort, the things that can be so dealt with. It is, to quote again briefly from the same paper in *MIND*, “in this capability of being passed on from hand to hand that both ‘objectivity’ and identity primarily consist. I know that a colour or a sound is one thing to me, and another more or less similar thing to my neighbour. How, on the contrary, do I know that an inch measure is precisely the same thing for him as for me? The explanation does not lie in any peculiarity of the primary sensations caused by the inch measure. I could have no assurance from the nature of the sensations that it produces when pressed against my palm

that they would be, in any sense, the same as those which it would produce when pressed against your palm. Indeed, I might be quite sure that they would not. In what then does the sameness consist? In the fact that the measure occupies the same space for you as it does for me; and that, in its ultimate analysis, means simply this, that you cannot hold it in your hand while I hold it in mine. Once we have got the length of finding things which are the same as between us, measurement becomes possible, and thenceforward all accurate quantitative knowledge."

Intelligence, as M. Bergson acutely remarks, has for its object, in an especial manner, the unorganised solid, and, beyond question, a profound change comes over the whole of our mental experience as soon as we grasp the simple conception of the "Thing," the object which exists and possesses identity for two or more people at once. Among the mental processes and products that then, for the first time, become possible are denotation, naming and language. What may be called absolute position too then emerges, position determined by the intersection of innumerable lines having their points of departure in innumerable human subjects, now, perhaps, at length capable of comparing notes with each other. The "object," an island in space, gives us then also the conception of the "particular," numerically different from other particulars, though otherwise indiscernible from them. It gives us thus the conception of unity, and with it of number, that is of unity indefinitely repeated, and so arithmetic is born. It makes possible too, I think, the conception of substance, the substratum of all qualities, the subject of all predicates.¹ Empty space now also becomes recognisable as the interval between objects, while matter is found in their felt resistance to our motor activity, now moreover for the first time made capable of being compared with the similar resistance experienced, in identical circumstances, by other subjects.

We are led thus to the conclusion that what we call the primary qualities of matter are the products of this intersubjective intercourse while the secondary qualities of matter, on the contrary, can be reached at the stage of simple individual sensation. The former, unlike the latter, thus necessarily contain, even when first recognisable by us, a large element of inference, of thought, of reasoning; and we may, perhaps, now be ready to recognise how wise and how

¹ All nouns of course are not the names of solid objects, but all are, in a sense, modelled on the solid object as their type.

true were the instincts of our great philosopher, Locke, when he placed them in a category of their own, well distinguished from the secondary ones.

We can see in a clear light, I think, the width and the depth of the gulf that separates the two classes if we will but duly consider Hume's famous example of the straight stick that appears as bent in water. The bent appearance is palpably illusion, says Hume; and, following Berkeley, he goes on to argue that all the information that can be brought to us in any shape through the senses about the outside world is something that is precisely similar to it in character. But how is it that we can be so certain that the bent appearance of the stick is illusion? How but by comparing it with the information given us by taking the stick in our hands and feeling it? But if that is so, we plainly assume that feeling the stick, passing it, perhaps, from hand to hand, ends in giving us information about its form that is absolutely valid and trustworthy. We would not, indeed, have the conception even of illusion itself, as Dr. Ward, somewhere, very justly remarks, if we had not in some shape or other something that provided us with a standard of truth and reality with which to compare it.

We find in the Kantian system a remarkable inversion of the nature and function of these primary and secondary qualities. Unity, quantity, extension, shape, position in space; all these and others like them are set down as forms of sensibility, as something miraculously conferred on us at birth. They are *a priori* and subjective; they are the qualities of that which is phenomenal alone as contrasted with the world of reality constituted by things in themselves. What are they, however, but Locke's Primary Qualities of matter? Deduct them from the total of the information given us, apparently at any rate, by sense, and what is left? What can be left but the secondary qualities?¹

Are the secondary qualities then—in Kant's language, the matter of sensation—that which alone gives us any glimpse of reality, of 'he causality of things in themselves, to which we can conceivably attain? The conclusion, if we are forced to draw it, is certainly an amazing one, and it is not surprising that, in these circumstances, post-Kantian speculation very soon dropped the "matter of sensation" and the "thing in itself" altogether, and fell back on the conception of the whole outward world as being the creation of conscious-

¹ Even touch and the muscular sense yield only secondary qualities apart from intercourse.

ness. With Descartes what corresponded approximately to the primary qualities were the *modi rerum*, to the secondary, the *modi cogitandi*. With Kant, whatever the secondary were, the primary, as we well know, were nothing but the *modi cogitandi*.¹

I have referred above to Mill's conception of the permanent possibility of sensation. The truth is that the use of the abstract noun "possibility," meaning, of course, primarily, the fact of being possible, with an indefinite article prefixed to it as the designation of something conceived of as a particular is more or less of a solecism. What term then, it may be asked, would it come natural for us to use in the circumstances. What other than the term "Cause"? We cannot help thinking of the fire as the cause of the melting of the wax, nor can we help thinking of both the fire and the wax conceived of as things or objects that are the same for all of us as in truth the causes of the visual appearances that they present to each. "The purely hypothetical causes," some one will answer. But is this really so? When we take an example from the sensations of sound it comes perfectly natural to us to speak or think of the waterfall, let us say, as the cause of the sound that we hear as we approach it. To call the rose, however, the cause of the visual appearances that it presents to us does not, no doubt, sound quite so natural. We have probably been thinking of the rose and its appearance as one thing, not as two which are capable of correlation with each other as cause and effect. We think of the reddish or yellow colour as a quality of the rose which we may regard as being itself the substance, the substratum that underlies all its qualities. We are thus led to the conclusion that substance and quality are really at bottom cause and effect under another name. In sound we call that cause and effect which in vision we call substance and quality. The difference lies mainly in the instantaneousness with which the emergence of the secondary quality, colour, follows on the thing behind it, as compared with the comparative slowness with which the secondary quality sound, follows on the thing which is behind it.

If, however, we can quite legitimately ascribe the sound to the waterfall as its cause, what is there that is illegitimate in ascribing the colour of the rose to the rose itself as its cause? Here, however, the objection is raised that the cause referred to in the second case is something non-existent. You

¹ At the same time it must be said that Kant's view usefully emphasised the element of thought in the primary qualities.

have an orange, say; take away its qualities one by one, its colour, smell, roundness, consistency, extension and what is left? Nothing. What then can your rose be which you call the cause or the substratum of its colour?

This reasoning depends for any apparent cogency that it possesses upon the tacit assumption that—as in the case of Hume's stick apparently bent in water—the primary and secondary qualities of matter are things that stand upon the same level with each other epistemologically. We found, on the contrary, in the former case that the primary qualities represented the reality by comparison with which alone it was possible for us to pronounce the secondary ones illusion. Take away, along with colour and smell, *compared* extension and *compared* resistance, and of course no substance is left. But then are not compared extension and compared resistance the very things to which the experience of the race has given the name of substance? In other words may they not be justly regarded as being that which furnishes us with the conception of the "Thing," the outward object endowed with an existence independent of our own, and thus capable of being the cause of our sensations.

As regards this genesis of the concept of the 'Thing' two views are possible, one that it is a process of ideal construction, in other words, of creation, another that it is a process of discovery. The former is, no doubt, the more usual view. The only writer, so far as I am aware, who has given distinct expression to the latter is Prof. Alexander. "The apprehension of things which are not mental," he says, "is a process of discovery and not in any sense of creation".¹ We have called it a process of inference. Let us compare with it other cases of inference. In doing so we must note that it is the more developed type of inference that is the familiar fact and that in conceiving of the co-ordination of the sensations of vision with touch transformed by inter-course as inference we are likening this more primordial but really less familiar and less easily understood fact with developed inference as the more easily understood one.

Take the often-used example of the Island. How do we prove, say, that Great Britain is an island? By sailing round it. We have as our major premise or general rule, implicit rather than explicit perhaps, "sea surrounded lands are islands". Then as we accomplish the voyage and come in sight of the port that we started from, our minor emerges: "This land is sea surrounded". Thence we conclude "This

¹ *Hibbert Journal*, Oct., 1909, p. 58. He regards, at the same time, as not mental much that I cannot help regarding as mental.

land is an island". Again, let us ask, How did we get the conception of an island originally? The answer is again: By sailing round lands which can be sailed round. This operation sufficiently often repeated and reflected on generated the concept of the Island, and in time that name was assigned. We are thus led to conclude that the process by which we prove a fact once a name has been assigned, is *the very same process* as that by which we generate a concept before any name has been thought of. Apply then the same principle to the Thing, the outward object which exhibits the commonplace reality of naïve realism. How do we prove that any appearance corresponds to a reality? By touching and handling the thing to which the appearance corresponds if it is within our reach. But it may be said, the touching and handling as well as the seeing might all take place in a dream. Is there then any further method of proof to which we can resort. There is; we can say to our neighbours, Come and feel and handle this alleged thing also, and tell us how it presents itself to you. If they do this and pronounce it real, that, we conceive, settles the question. But why? Simply because common consent entered originally into the genesis of the thought of reality. Proof and genesis again are found to be one and the same thing. Both are the products of intersubjective intercourse.

Here, however, an interesting point is to be noted. The proof of insularity, as we have seen, is the same thing as the genesis of the concept "Island". Turn again, however, to the primordial inference in regard to the Thing, and we find it commonly alleged that the proof of Thinghood or reality is the same not as the genesis of the *concept* of the Thing, but actually as the genesis of the actual Thing itself. No one of course asserts that sailing round land creates the very land itself which we call an island, but many assert that the mental processes through which the concept Thing emerges create the very Thing itself. If they do not create it, however, then plainly they should be viewed as processes of discovery rather than as processes of ideal construction.

"Being and reality," says Mr. Bradley, "are one thing with sentience,"¹ and we know that this view is shared by many writers whose general system of thought is widely different from his. How does it square, let us ask, with the conclusions at which we have arrived?

In the case of the stick apparently bent in water there was, we found, a sort of sentience present which we could not

¹ *Appearance and Reality*, p. 146.

call reality but were forced to set down as illusion, and this conclusion if valid emphasises the divorce between mere sentience and reality. Every illusion, indeed, exists for the moment and on that ground you may, of course, if you please, ascribe to it a sort of reality of its own. But plainly the reality that is in point for us here is the reality that we contrast with illusion. It is reality in what we may call its *primary* meaning. The epithet "primary" is borrowed from jurisprudence,¹ and its unavoidable use points to the important conclusion that we have to recognise gradation in connexion with the meanings of such words. As M. Bergson remarks in a similar case, a class must be defined "not by its possession of certain characters but by its tendency to emphasise them". Mere sentience then plainly does not guarantee to us reality in its primary sense. It only gives us that conception indeed when it is combined with inference, when it is the sort of sentience that verifies an inference.

From Plato to Locke the conception that ruled in the world was that sensation alone gave us no true knowledge; that such knowledge was attainable by reason only. We are, perhaps, tending to come back some way in the direction of that conception in learning that even in the simplest perception of any outward object there is an element of reasoning, that no two of us can see the same sun by virtue alone of sensation pure and simple, and apart from processes of reasoning that are no less truly reasoning because they are so rapid and so early learnt that they seem to present themselves in the guise of immediate intuition. The aptitude for such reasoning has no doubt been born with us, and it is these aptitudes, not the full-fledged knowledge that arises from their exercise, that can truly be regarded as *a priori*.

Reality, in its primary sense, we are thus led to regard as the correlate of truth. Truth itself may perhaps in some sense be used as applicable to immediate feeling *per se* while it lasts, even if the feeling is one experienced in a dream; but it is obviously only in a secondary sense that it can be so used. Primarily it applies to assertions, and as these must be the assertions of our neighbours, it too is plainly a concept of intercourse. If we were alone in the universe assertions would be unknown. From the truth of assertions we take the conception and apply it to the truth of inferences. Whatever else inferences may be they are at any rate something that gives us information just as the assertions of our neighbours do,

¹ Cf. "The primary meanings of words and their extensions," ch. iv. of *Monetary Economics*, by the present writer, pp. 39-51.

information that may be true, or that, on the other hand, may turn out false. The primary conceptions of truth and of reality alike imply the possibility and the necessity of verification; and here we are brought in view of another conception which is also a correlate of reality, though from another point of view, the conception of knowledge. Like truth it is primarily a conception of intercourse, and refers to information given us by speech and subsequently verified by comparison with fact. From such information, as in the case of truth, we transfer the concept to inference. *A priori* knowledge is thus a contradiction in terms. Being knowledge it must be thought of as verified by comparison with fact, but being *a priori* it must be thought of as unverified.

In connexion with verification a point of some interest emerges. It is this, that we can verify nothing in the immediate present. Before we have time for such verification the present has become the past. Verification and with it thus necessarily truth, knowledge, reality and existence, appear all to have a future content. Say that this chair exists, what I really mean is that it will be possible for me or for any one to handle it, and then to experience the sensation of resistance, which ultimately warrants the thought of its existence. Existence thus when predicated in its primary sense means at any rate existence lasting on into the immediate future, and thus existence that is apart from sentience. Existence for the moment in the temporal flux would of course be quite unverifiable. Every assertion that we make about the real world as well as every inference that we draw has, if we look for it, a future reference. M. Bergson's view that the present is a device of conceptual thought, and that reality lies alone with the onward flow of temporal duration, thus seems to embody a truth that we have to reckon with. It seems very emphatically to negative the notion that reality and truth are or can be coincident with immediate sentience and with that alone.

The reality of the outward world is what naïve realism conceives it to be. The substance that underlies qualities, the causes of sensible impressions. It is not sensation only but something that more nearly approaches Mill's notion of the permanent possibility of sensation, the something inferred to be always there that has only to be approached and touched in order to generate sensation. If Hume's theory of causation had any validity we should call the appearances, which always come first whenever we handle material objects, the cause of the sensations of touch and resistance that ordinarily follow them. We do not do this because intercourse and

thought working on the basis of sense data unveil for us a world of permanently existing causes or things that are discovered to have priority to these appearances.

In the instances cited I have confined myself to the very simplest of the effects of intercourse on thought, to its operation in connexion with the genesis or the discovery, as we choose to conceive it, of the solid unit, the ordinary thing of the outward world. I have dwelt little on the use of language, though naming has, of course, always to be reckoned on as being there in the background "objectifying the subjective" as Lotze expresses it or, in Green's words, converting the feeling into the thing felt.¹ When we bring in language and consider its effect in moulding thought, not only in regard to external objects and their qualities, but also in regard to feelings, sentiments and desires, to what Locke would have called "mixed modes," a vast field of investigation and discussion opens up in front of us on which, however, in the present paper, it is impossible to enter.

Of all the philosophers with whose works I have any acquaintance either at first or at second hand Locke appears to me to be the one who was most consistently alive to the true rôle which the spoken word plays not only in registering but also in transforming both feeling and thought. It is noteworthy too that he seems to be always becoming more and more thoroughly awakened to the truth in regard to its action in these respects as his investigation proceeds. He tells us himself that, to begin with, he had no conception of the importance of words and of the part they played in mental operations. In the end, as we know, he finds it desirable to devote one large section of his work, his Third Book, to research in connexion with them. He appears to be always struggling with a fallacious conception, one indeed even at this moment very prevalent and very influential, to the effect that all questions connected with the meaning of words are merely verbal in the sense of being altogether trivial. It is a conception that applies to nomenclature as used in regard to streets or stars or racehorses, but not, I think to the gradually developed words which embody the no less gradually developed ideas of the race. In the later part of his Essay he appears to be reaching a contrary and a sounder view.

As regards the scattered references to the question made by other philosophers we have Berkeley's recognition already

¹ "The moment it is named it has ceased to be a feeling and becomes a felt thing". *Green's Works*, vol. i., p. 264. The reference is to heat or flame.

noted of the effect on our thought of the fact that perceptions identical with our own exist for others. To turn to the Germans, it is worthy of remark that Kant regards his empirical reality within the field of phenomena as "that which is valid for the sensuous faculty of every human being". I opened the paper with Schelling's utterance to the effect that "The common world arises through the co-operation of many intelligences". Perhaps that observation again was suggested by Fichte's remark that "Only of that which others testify to me do I know that it is not my (dream) world but is the real world". Coming to more recent speculation we find Fechner saying "We have no reason whatever for supposing that there exists more of the corporeal world than the combination of phenomena which is governed by laws, and which exists for more than one unit of consciousness at the same time". Fechner too thus appears to hold that the identity of presentations for various minds, furnishes in large measure the basis of all that we can call reality.

The history of the categories since Kant has again some bearing on our general conclusion. We find Herbart maintaining that when rightly treated they coincide with the forms of language, while Trendelenberg contends that the Aristotelian categories themselves were based on the analysis of the sentence. Lotze's view is similar to Herbart's and it is one, as we know, that plays an important part in his system. He alludes playfully to Kant's conception of "thought as standing fronting the impressions as they arrive with a bundle of logical forms in its hand uncertain which form can be fitted to which impression and therefore needing some special expedient to discover how to pair them properly". In his own system, when all is said and done, we find substituted for the elaborate machinery of the categories and their schemata the conception of the presentation continuum as finally articulated into things, properties and events corresponding to the nouns, adjectives and verbs of common language. In other words we find the world of individual experience conceived of as transformed through the exigencies of intercourse into the world of common experience which we call the world of reality.

IV.—IMPLICATION AND THE ALGEBRA OF LOGIC.

BY C. I. LEWIS.

THE development of the algebra of logic brings to light two somewhat startling theorems: (1) a false proposition implies any proposition, and (2) a true proposition is implied by any proposition. These are not the only theorems of the algebra which seem suspicious to common sense, but their sweeping generality has attracted particular attention. In themselves, they are neither mysterious sayings, nor great discoveries, nor gross absurdities. They exhibit only, in sharp outline, the meaning of "implies" which has been incorporated into the algebra. What this meaning is, what are its characteristics and limitations, and its relation to the "implies" of ordinary valid inference, it is the object of this paper briefly to indicate.

Such an attempt might be superfluous were it not that certain confusions of interpretation are involved, and that the expositors of the algebra of logic have not always taken pains to indicate that there is a difference between the algebraic and the ordinary meanings of implication. One may suspect that some of them would deny the divergence, or at least would maintain that the technical use is preferable and ought generally to be adopted. As a result, symbolic logic appears to the uninitiated somewhat as an *enfant terrible*, which intimidates one with its array of exact demonstrations, and demands the acceptance of incompressible results.

In the algebra of logic, ' p implies q ' is defined to mean 'either p is false or q is true' [$(p \supset q) = (\neg p \vee q)$ Df.].¹ But

¹ I choose this form of the definition partly because it is the one used in the most economical development of the calculus of propositions—in the *Principia Mathematica* of Russell and Whitehead—and partly because of its convenience for the discussion in hand. Other defined equivalents of ' $p \supset q$ ' are:—

(1) $p = pq$ (the assertion of p is equivalent to the assertion of p and q both);

(2) $\neg(p \neg q)$, or, $p \neg q = o$ (that ' p is true and q is false' is a false assertion; or, the proposition which asserts p and denies q is false); and

this last expression is equivocal. Implication is defined in terms of disjunction, but 'either—or' propositions may have at least three different meanings. One of these is ruled out when we understand that ' p or q '—either p is true or q is true—must not be taken to exclude the possibility that both p and q may be true. Disjunctions in the algebra do not signify mutual exclusion. If p be true, it is not implied that q is false. A convenient statement of this takes the form, "*At least one of the propositions p and q is true*". Two meanings of disjunction still remain. The implication of the algebra of logic bears the same relation to the one of these that the Aristotelian "implies" bears to the other. Hence the need of distinguishing carefully between these two sorts of disjunction.

Compare, if you will, the disjunctions: (1) Either Cæsar died or the moon is made of green cheese, and (2) Either Matilda does not love me or I am beloved. In both cases, at least one of the disjoined propositions is true. The difference between the two may be expressed in a variety of ways. The second disjunction is such that at least one of the disjoined propositions is "necessarily" true. Reject either of the possibilities and you thereby embrace the other. Suppose one of its propositions false and you are in consistency bound to suppose the other true. If either lemma *were* false, the other would, by the same token, be true. None of these statements will hold for the first disjunction. At least one of its propositions is, as a fact, true. But to suppose it false that Cæsar died, would not bind one to suppose the moon made of green cheese. If 'Cæsar died' *were* false, the moon would not necessarily be made of green cheese,—if conditions contrary to fact have any meaning at all. It is this last which the algebra is, according to its meaning of disjunction and implication, bound to deny.

The most significant distinction, however, remains to be noted. The second disjunction is such that its truth is in-

(3) $(p \vee q) = q$ ('either p is true or q is true' is equivalent to ' q is true').

It comes to the same thing in the end, whichever one of the four mentioned definitions of implication be chosen. Any one of them may be deduced as a theorem in a properly constructed system which adopts any other at the start. The choice depends solely upon the method of developing the particular system (see Whitehead, *Universal Algebra*, p. 40).

The symbolism which will be used in the paper is that of the *Principia Mathematica* with slight modifications. The letters, p , q , stand for propositions or 'propositional functions'. \supset signifies 'implies'. \vee is the sign of disjunction. $\neg p$ may be read 'not- p ' or 'the negation of p ' or ' p is false'. Similarly p may be read as written or as ' p is true'.

dependent of the truth of either member considered separately. Or, more accurately, its truth can be known, while it is still problematic *which* of its lemmas is the true one. It has a truth which is prior to the determination of the facts in question. The truth of 'Either Cæsar died or the moon is made of green cheese' has not this purely logical or formal character. It lacks this independence of facts. Its contradiction would not surprise a logical mind unacquainted with history.

It requires careful analysis to separate these two meanings of 'either—or' propositions, though their main features may seem sufficiently distinct. We may call disjunctions like (1), whose truth cannot be known apart from the facts, extensional disjunctions; those of the type of (2), whose truth can be known while it is still problematic which member is true,—or whether both are true,—we may call intensional. These two may be further distinguished by considering their negatives. If one take 'Either Cæsar died or the moon is made of green cheese' to be a false statement, one may mean thereby that a certain relation is falsely asserted of the two propositions 'Cæsar died' and 'the moon is made of green cheese'. If Smith asserts, "Either my name is not Smith or this is my hat," one might reply: "No, you are wrong; there may be other Smiths in the hall with names in their hats". One does not deny that Smith knows his own name, or that this is his hat. One denies only that his statement exhausts the possibilities. The negative of intensional disjunction is, thus, the negation of the disjunctive relation itself and not the negation of either member. To take another example: (3) Either London is in England or Paris is in France; one may deny that any "necessary" disjunction is here involved, though either half of the statement by itself is true. If either member of the disjunction *were* false, the truth or falsity of the other would not thereby be affected. Perhaps we cannot ever be certain of the possibility of such a contrary-to-fact condition. Still we *know what we mean* when we suppose it. The negation of intensional disjunction is, then, the negation of a logical relation of propositions, and is entirely consistent with the truth of one or both of the disjoined assertions. One denies only that the disjunction has any truth apart from the facts in question.

The negative of extensional disjunction is the denial of *both* its members. Taking 'either—or' in their reference to extension, neither (1) nor (3) can be denied. The truth of extensional disjunction is secured by the truth of either

member, regardless of "logical connexions," and the negation of extensional disjunction accordingly negates both the disjoined propositions.

That the meaning of disjunction in the algebra of logic must consistently be confined to the extensional, follows from the fact that, in the algebra, the negative of a disjunction is the negation of both its members [$\neg(p \vee q) = \neg p \wedge \neg q$],¹ and the negative of a "product"—*e.g.* 'both p and q are true'—is the disjunction of the negatives of its factors [$\neg(pq) = (\neg p \vee \neg q)$].¹ Every intensional disjunction is also extensional, or, more accurately, the intensional disjunction of p and q implies their extensional disjunction also. But the reverse does not hold. Of every intensional disjunction, at least one member *is* true; but not every 'either . . . or' proposition with at least one true member is an intensional disjunction. If, however, any one suppose that the algebra can treat of intensional disjunctions "because they are a special class of extensional disjunctions," let him consider the fact that, in negating *any* disjunction, the algebra negates both its members. If p and q are disjoined both extensionally and intensionally, still the algebra treats only of their extensional disjunction. That this is not mere "logic chopping" will appear when we come to convert disjunctions into implications.

Before leaving the subject of disjunctions, we should note two further characters of the intensional variety. A genuine intensional disjunction does not, of course, suffer any alteration of its logical nature if one of its members is known to be false, or one known to be true, or when both things are known. 'Either Matilda does not love me or I am beloved' loses none of its intensional character if it is discovered that Matilda does not, in fact, love me, or that I am actually beloved. In argument, one produces a dilemma² for the purpose of introducing later the falsity of one member and thus proving the truth of the other. The dilemma has the same meaning to the speaker who knows its solution and to the hearer who does not. Its character as intensional disjunction

¹ De Morgan's theorem.

² A dilemma *may be* an intensional disjunction with the restriction that its members cannot be true together. Extensional disjunctions admit of the same limitation while still remaining extensional. This last type, however, do not appear in discourse except as mere truisms or as figures of speech. Example (1)—Either Cæsar died or the moon is made of green cheese—belongs to this class. It is a truism, or—if meant to be taken as *intensional* disjunction—hyperbole. Thus we might have distinguished four types of disjunction instead of three. But the important division is that of intensional in general from extensional in general.

is attested by the fact that the hearer can know its truth before knowing its solution,—and by the further fact that both speaker and hearer, after reaching the solution, are still bound by the condition which turns out to be contrary to fact. If the true member *were* false, the other would necessarily be true.

Again, intensional disjunction is not restricted to the purely formal or *a priori* type of (2). Suppose a wholly reliable weather forecast for the 16th of the month to be "Warm". This implies that (4) either to-day is not the 16th or the weather is warm. On the supposition made, this is an intensional disjunction. One might know its truth even if one could not find a calendar and were suffering from chills and fever. But strike out the initial assumption and the disjunction becomes, if still true, extensional. Knowledge of its truth now depends upon verification of one or both of its members. We may say that extensional disjunction concerns actualities; intensional disjunction, possibilities. But one or more facts being given, the possibilities are thereby narrowed, and an intensional disjunction which is not *a priori* may be *implied*.

As has been said, intensional disjunction bears the same relation to inferential or "strict" implication¹ that extensional disjunction bears to the algebraic or "material" implication. Intensional disjunctions when converted into implications, according to the equivalence which the algebra states, become strict implications. Extensional disjunctions, by the same rule, produce material implications. In either case ' p implies q ' is equivalent to 'either p is false or q is true,—to 'either not- p or q '. [$(p \supset q) = (\neg p \vee q)$ Df.]. Taking the intensional disjunctions: if we let p represent 'Matilda loves me' and q 'I am beloved,' example (2) states exactly 'either not- p or q '. 'Either Matilda does not love me or I am beloved' is equivalent to 'Matilda loves me implies that I am beloved'. Since 'either . . . or' states a reversible relation, we may equally well let p represent 'I am beloved,' and q 'Matilda does not love me'. 'Not- p implies q ' will then read: 'I am not beloved' implies that 'Matilda does not love me'. By the same process, (4)—'Either to-day is not the 16th or the weather is warm'—may be transformed into, 'To-day is the 16th implies that the weather is warm,' and, 'The weather is not warm implies that to-day is not the 16th'.

¹ We may call this kind of implication "strict" at least in the sense that its meaning is narrower than that of the algebraic implication.

Remembering that (4) is an intensional disjunction only in the light of a certain presupposition, we may observe that, in this case also, intensional disjunction produces strict implication.

If p and q are intensionally disjoined, then,—whether p , or q , or both are, in fact, true,—if p were false, q would be true. The negation-of- p implies q in the ordinary meaning of 'implies'. Also if q were false, p would be true; p can *validly be inferred* from the proposition which negates q .

Examples (1) and (3) are extensional disjunctions. If we let p represent 'Cæsar died' and q represent 'The moon is made of green cheese,' 'not- p implies q ' will read, 'Cæsar did not die' implies that 'the moon is made of green cheese'. Interchanging p and q above—since 'either . . . or' is reversible—we have, 'The moon is not made of green cheese' implies that 'Cæsar died'. Thus we get the implications of the algebra. The former of these is a good example of the sense in which a false proposition implies anything; the latter well illustrates how a true proposition may be implied by any proposition. By the same method (3) 'either London is in England or Paris is in France' gives us, 'London is not in England' implies that 'Paris is in France,' and, 'Paris is not in France' implies that 'London is in England'. Each of these last may be regarded as a case of a false proposition implying any proposition and, at the same time, of a true proposition being implied by any. *Any two true propositions whatever* might have been substituted for 'London is in England' and 'Paris is in France'; the implications would have resulted in the same way. The denial of the one would imply the other; the denial of the other, the one.

In order that it may be clearer that implication has, in the algebra, *no other significance* than that exemplified by the transformations of (1) and (3), let us consider what is involved in *denying* the algebraic implication relation. Take any false proposition, p —e.g. 'Rome is still burning'—and any true one, q —e.g. 'Christmas is coming'. At once the extensional disjunction 'either p is false or q is true' is satisfied—by the falsity of p alone, or by the truth of q alone,—and it follows that p implies q . [$(p \supset q) = (\neg p \vee q)$ Df.]. To deny that p implies q is to deny the equivalent disjunction 'Either p is false or q is true'. [$\neg (p \supset q) = \neg (\neg p \vee q)$]. To deny this disjunction is, according to the algebra, to deny the truth of both its members, *i.e.* to assert p and deny q . [$\neg (\neg p \vee q) = p \wedge \neg q$]. Thus, if one would deny that 'Rome is still burning' implies 'Christmas is coming,'

one must assert that Rome still burns and deny the advent of Christmas.

Or we may take any two problematic propositions, as (*p*) 'Swift married Stella,' and (*q*) 'There are other universes beyond ours'. At once we can assert, according to the algebra, that if *p* does not imply *q*, *q* implies *p*. If *p* is false, that alone satisfies the extensional 'Either *p* is false or *q* is true' and proves that *p* implies *q*. Similarly if *q* is true. If *p* is true and *q* is false—the only situation for which *p* does not imply *q*—then it is at once doubly certain that *q* implies *p*. Of any two false propositions, each implies the other; and similarly, of any two true propositions, each is implied by the other. If one of two propositions is false and the other true, the former implies the latter. Either 'Swift married Stella' implies that 'there are other universes beyond ours,' or 'there are other universes beyond ours' implies that 'Swift married Stella'. And there is an even chance that the implication is mutual. Indeed the algebra of logic allows us to make these assertions prior to all knowledge of the content of *p* and *q* and apart from any consideration of what would ordinarily be called their logical import.

Most theorems in the algebra admit of being exemplified within the field of strict implications and intensional disjunctions. Aside from those which involve the negative of a disjunction, there are only a few which do not. All of these are the results of a single assumption of the calculus of propositions, the so-called principle of addition. This principle states that *p* implies 'either *p* or *q*'—if *p* is true, then either *p* is true or any other proposition, *q*, is true. [$p \supset (p \vee q)$]. We have already noted it in observing that an extensional disjunct is satisfied simply by the fact that one of its members is true. That this principle is formally false for intensional disjunctions is apparent when we note that—in the strict sense of implies—*p* does not imply that if *p* were false, any other proposition *q* would necessarily be true. From the fact that to-day is Monday, we cannot infer that if to-day were not Monday, the corn crop would be destroyed.

Assuming '*p* implies (either *p* or *q*),' the proof that a false proposition implies any proposition is short and easy. Substituting not-*p* (*p* is false) for *p*, we have, 'not-*p* implies (either not-*p* or *q*)'. Replacing 'either not-*p* or *q*' by its defined equivalent '*p* implies *q*,' not-*p* implies that '*p* implies *q*,'—'*p* is false' implies that '*p* implies any other proposition, *q*'. If or when *p* is false, the consequence '*p*

implies q ' follows. A false proposition implies anything. Resuming the proof in symbols: Addition— $p \supset (p \vee q)$. Substituting $\neg p$ for p throughout, $\neg p \supset (\neg p \vee q)$. $(\neg p \vee q) = (p \supset q)$, by definition. $\therefore \neg p \supset (p \supset q)$. The proof that a true proposition implies any proposition requires one additional principle—that disjunctions are reversible. $[(p \vee q) = (q \vee p)]$. Assuming that ' p implies (either p or q)', we may reverse the disjunction and get ' p implies (either q or p)'. Substituting not- q for q , ' p implies (either not- q or p)'. Replacing this disjunction by its equivalent ' q implies p ', the result is, ' p implies that q implies p '. If p is true, it is also true that any other proposition, q , implies p . A true proposition is implied by any proposition. Addition— $p \supset (p \vee q)$. $(p \vee q) = (q \vee p)$. Substituting $\neg q$ for q , $p \supset (\neg q \vee p)$. $(\neg q \vee p) = (q \supset p)$, by definition. $\therefore p \supset (q \supset p)$.

The existence of these two theorems in the algebra brings to light the most severe limitation of the algebraic or material implication. One of the important practical uses of implication is the testing of hypotheses whose truth or falsity is problematic. The algebraic implication has no application here. If the hypothesis happens to be false, it implies anything you please. If one find facts, x, y, z , otherwise unexpected but suggested by the hypothesis, the truth of these facts is implied by one's hypothesis, whether that hypothesis be true or not—since any true proposition is implied by all others. In other words, no proposition could be verified by its logical consequences. If the proposition be false, it has these "consequences" anyway. Similarly, no contrary-to-fact condition could have any logical significance, whether one happen to know that it *is* contrary to fact or not. For if the fact *is* otherwise, the proposition which states the supposition implies anything and everything. In the ordinary and "proper" use of implies certain conclusions can validly be inferred from contrary-to-fact suppositions, while certain others cannot. Hypotheses whose truth is problematic have logical consequences *which are independent of its truth or falsity*. These are the vital distinctions of the ordinary meaning of "implies"—for which ' p implies q ' is equivalent to ' q can validly be inferred from p '—from that implication which figures in the algebra.

That the definition of implication in terms of extensional disjunction is in accord with any ordinary or useful meaning of the term can hardly be maintained with success. There can be, however, with regard to such a definition, no question of truth or falsity in the ordinary sense. As one of the assumptions or conventions of the calculus of propositions, the

definition represents only the exact statement of the way in which expressions are to be equated or substituted for one another. Provided it is possible so to equate them without contradiction, it is meaningless to call the equations untrue. We may, however, object to the definition on the ground that a more useful one is possible; and especially will this be the case when the system in question is one, like logic, which we wish to apply in some field of practical human endeavour. The present calculus of propositions is untrue in the sense in which non-Euclidean geometry is untrue; and we may reproach the logician who disregards our needs as the ancients might have reproached Euclid had he busied himself too exclusively with the consequences of a different parallel postulate.

Nothing that has preceded should be taken to imply that the algebra of logic is necessarily unequal to the task of symbolising such logical processes as those of inference and proof, or the more general processes which the algebra itself has the value of bringing to light. Our conclusions militate not against symbolic logic in general, but against the calculus of propositions in its present form. As a matter of fact, a few simple changes would remove all the "absurdities" from the present calculus and bring it into agreement with the strict meaning of implication. The principle of addition— p implies 'either p is true or q is true'—is the only one of an economical set of postulates of the present calculus¹ which is false for the intensional meaning of disjunction and, consequently, for strict implication. If this were removed, and disjunction confined—as a matter of interpretation—to the intensional variety, we should be well on our way to a new calculus. One other change would be necessary. The equivalence of "products" with the negatives of disjunctions and of the negatives of products with disjunctions [$pq = \neg(\neg p \vee \neg q)$, and, $\neg(pq) = (\neg p \vee \neg q)$] is inconsistent with the exclusion of purely extensional disjunctions.² The product pq —' p and q are both true'—would, accordingly, appear as a new indefinable, though capable of clear interpretation. In place of the principle of addition, the principle of simplification—' p and q are both true' implies ' p is true' [$pq \supset p$ —would be assumed. 'Addition' could no longer be deduced from it, as at present, when the negatives of disjunctions and products had no symbolic equivalents.³ A careful analysis of what these

¹ See those of the *Principia Mathematica*, pp. 98-101.

² De Morgan's Theorem holds only for extensional disjunction.

³ Both would still have important implications.

changes involve leads one to discover certain ambiguities and confusions which exist even in what ordinarily passes for sound reasoning.

An alternative and more fruitful method of developing the calculus of strict implication would be to retain both extensional and intensional disjunction, symbolise them differently, and define implication in terms of intensional disjunction only. The extensional disjunction would now have its negative in a product, as at present, and the principle of addition could be retained, but only for extensional disjunction. As a consequence, such theorems as 'a false proposition implies any proposition' would still not appear, but the principle of simplification [$pq \supset p$] could be deduced instead of being assumed. This second mode of development would produce a calculus which retained all the theorems of the present one which hold for the ordinary meaning of implication, and would reject automatically those which appear to the uninitiated as "absurd". It would also be much wealthier in theorems than the present calculus, because of the fact that the intensional disjunction of p and q implies their extensional disjunction also, though not *vice versa*. And, owing to the distinction of these two meanings of 'either . . . or' propositions, this calculus would prove a valuable instrument of logical analysis. Its primary advantage over any present system lies in the fact that its meaning of implication is precisely that of ordinary inference and proof.

V.—DISCUSSIONS.

THE 'WORKING' OF 'TRUTHS'.

MR. STEBBING¹ has been kind enough to take notice of my protests against the current false conversion of the pragmatist formula about the 'working' of 'truths'. He is so far as I know the first of the opponents of pragmatism to have done so in print, and as my disclaimer of the doctrine that 'all that works is true' dates from 1903,² I am proportionately grateful. But I could wish that his communication had been better *documenté* and had stated his 'refutation' of pragmatism more fully.

At present one has to take Mr. Stebbing's word for it both that "the whole significance of pragmatism as a theory of truth, and its claim to both novelty and importance, rests upon the possibility of this conversion," and that "pragmatism entirely fails to provide any criterion for distinguishing 'truth' from 'error,'" while the evidence that "this conversion is (a) repeatedly made by James, and (b) assumed by Dr. Schiller" leaves much to be desired, or imagined. To me at least neither is Mr. Stebbing's word conclusive, nor his evidence sufficient. Hence, though I naturally hesitate to contradict one who speaks with so great an air of authority and decision, I must seek to justify my protests. I hope at all events to cast a doubt on Mr. Stebbing's claim to understand pragmatism better than its authors.

(1) Seeing that ever since Aristotle logicians have been warning reasoners against the dangers of 'simple conversions,' it did seem to me surprising that it should always calmly have been assumed, ever since Mr. G. E. Moore asserted it in 1902, that when pragmatists said 'all truths work,' they meant 'all that works is true,' and had never heard, poor simple souls, of the existence of lies and errors. It never, therefore, seemed to me self-evident that it was the *pragmatists* who had been oblivious of a simple rule of elementary logic.

(2) I am astonished to learn from Mr. Stebbing that "no one would contest that 'all truths work,' i.e. are satisfactory from some point of view". When did the last philosopher become extinct who ignored the psychological side of knowing, and (a) extolled 'pure' 'disinterested,' useless and inhuman 'Thought,' (b) thought that there was *no* connexion between 'truth' and 'satisfaction,'

¹ In No. 83, pp. 471-472.

² *Humanism*, p. 38.

and (c) thought that 'truth' was *wholly* conditioned by a relation to 'reality,' and entirely 'independent' of the psychical condition of the mind that apprehends it? This news had not yet reached me, and if Mr. Stebbing can give me authentic evidence of that philosopher's demise, I shall be happy to subscribe handsomely to a memorial tablet—or a cenotaph! Meanwhile, may I continue to think that to have argued the psychological *impossibility* of strictly 'disinterested' and completely 'useless' knowing is an important innovation which philosophy owes to pragmatism?

(3) Mr. Stebbing greatly disappointed me by not quoting more incriminating evidence from the now (alas!) very voluminous contributions of pragmatists to the theory of 'truth'. Indeed from me personally he seems to have taken just one phrase. The rest is 'dialectics,' in support of his assumption that the conversion is "assumed" by me "throughout". The one phrase quoted is taken from a preliminary description of how men do in fact proceed in awarding the epithets 'error' and 'truth,' which points out that actual practice conforms to the theoretic analysis of pragmatism. But it is *not* a statement of pragmatic doctrine, which, as I proceeded to show, is much less simple-minded than ordinary thought. In point of fact my initial account (1902) of the difference between 'postulates' and 'axioms' shows that I *never* imagined that a desire to have a thing true sufficed to make it true. I not only did not historically, therefore, but I could not logically, 'assume' that the sort of 'working' which consists merely in the agreeableness of a belief established its 'truth'.

James, similarly, *from the first* distinguished between the psychological 'Will to believe,' the logical 'right to believe,' and the verification of the beliefs thus *risked*, by experience of their working (*Will to Believe*, 1896, esp., p. 29). No doubt our critics have never paid the least attention to what we had said, and have always abandoned themselves to the guidance of their 'impressions' (*i.e.* prejudices), and have by now repeated their unfounded charges so often that they have come to believe them true; but if Mr. Stebbing is still young enough to have an open mind, he will see that these preconceptions prove nothing whatever against the existence of the authentic doctrine.

Mr. Stebbing, however, is rasher, or more honest, than the critics who dispense with '*Belege*'. He quotes two passages from James in support of his interpretation. The first (*Pragmatism*, p. 204), which in fact deals with the (different) questions of whether it is pragmatically important to distinguish in *certain specified cases* between saying 'it is useful because it is true' and 'it is true because it is useful,' and of what the word 'because' means in this connexion, is like the phrase quoted from me, *not* a statement of pragmatic doctrine but a comment on current phraseology. The context, "*You can say*" . . . "true is the *name* for . . ." and the beginning of the next paragraph, "From this simple *cue* prag-

matism gets her general notion of truth," which states the doctrinal inferences to be drawn from this situation, renders this so plain that Mr. Stebbing himself has here to abandon his case and can only say that James seems to him to come "dangerously near" to equating truth and usefulness.

His reliance on his second quotation, from *The Meaning of Truth* (p. 243) is still more surprising. For, in the first place, it does not profess to represent *James's own view*, but (a condensation of) *mine*. Secondly, it manifestly does not give any view of mine as to how we *ought* to think, but my analysis of how people *do* think. And I take it that it would be difficult for a philosopher of any school who is capable of understanding the psychological standpoint to deny that "what works is true and represents a reality, *for the individual for whom it works*". Clearly this holds of 'truth-claims,' and settles nothing about the social evaluation of such claims. Nor does the logical sting of my 'humanism' lie in my having perceived that individuals always begin by valuing as objectively 'true' whatever they find to have value for them,¹ but in the corollary that reasonable persons are in consequence willing to change their mind about truths according as they find they work in their *experience*, and therefore do not regard their actual 'truths' as 'absolute,' and so unimprovable.

In every case, then, Mr. Stebbing evinces his inability to distinguish between the psychological and the logical attitude; but clearly this should be a very slender ground for charging us with a confusion of logic and psychology.

(4) The charge that "pragmatism entirely fails to provide any criterion for distinguishing 'truth' from 'error'" is hardly candid. Indeed to refute it it is enough to quote *in its integrity* the very sentence on which Mr. Stebbing bases his criticism. What I said in *Arist. Soc. Proc.*, 1911, pp. 163-164) was that "we have never asserted or imagined that it is possible to pass from the dictum 'all truths work' to 'all that works is true,' but have always understood both the methodological nature of postulates, and been only too painfully aware of the vogue of errors and lies" (italics added). Moreover, I had previously distinguished (pp. 161-163) eight different sorts of 'truth-claim' or formal 'truth'. As 'validated' and 'axiomatic' truths are only two of these divisions, it is fairly obvious why 'all truths work' cannot be converted by a pragmatist into 'all that works is true'. "To distinguish these 'truths' from those other 'truth-claims' which satisfy some purpose but are found not to be 'true,'" is not therefore either a 'difficulty' to me, nor one I have failed either to observe or to discuss.

(5) It is not, however, impossible that Mr. Stebbing will seek to defend his bold misrepresentations of my statements by contending that they do not yield a test of truth in his sense, nor a

¹ It ought not to be necessary to add that both James and I were discussing cases where the *bona fides* of the valuer might be assumed.

"criterion for distinguishing 'truth' from 'error'" *absolutely*. If this is what he meant, I can agree with him. Pragmatism does not know of any *formal* criterion which will distinguish absolutely between truth and error, nor of any *infallible* 'test'. It discovered that 'there is no criterion of truth' *in this sense* (and no test prior to use) some time before the philosophers who now think that they can disclaim the duty of saying what they mean by 'true' and of discriminating it from 'false,' and yet avoid scepticism. *But it does not need such things*, and takes them as symptoms merely of the breakdown of intellectualism. It has abandoned the search for such impossibilities, and is content to understand 'criteria' and 'tests' in a humanly intelligible and scientifically practicable manner. And it can do this just because it does *not* take any truth or test (however adequate *pro tem.*) as absolute, and absolutely final. All its criteria of working are 'valuable,' not 'valid,' and all its testing is cumulative.

If then these terms have a different sense for Mr. Stebbing and for me, it merely becomes necessary for me to point this out, and to remind him that the task of discovering a criterion and test of truth *in his sense* has so far exceeded the powers of the acutest and profoundest minds among intellectualists. No such criterion has ever been found or devised, and the more attempts are made, the more complicated and incredible do the results become. The intellectual choice, therefore, is only between believing it a mistake to demand such an *a priori* formal test, and scepticism. And whichever of these alternatives is preferred, does it not remain a scandal that the 'theoretic' analysis of human thought should be unable to formulate a distinction which is practically in such familiar use as that between 'truth' and 'error,' and an absurdity that when a theoretic account of this distinction is demanded philosophers should naïvely proffer a formal definition of 'truth' which *includes* 'error'?

F. C. S. SCHILLER.

VI.—CRITICAL NOTICES.

La Reazione Idealistica Contro la Scienza. Da ANTONIO ALIOTTA.
Palermo, 1912. Pp. xvi. 528.

MR. ALIOTTA'S work, though, as he tells us in his Preface originally designed as a prize essay on a theme propounded by the Royal Society of Naples, has a value far surpassing that of most compositions of the kind. Indeed, it is a particularly excellent contribution to the history of modern philosophical ideas, catholic and comprehensive to the last degree in the completeness with which it takes account of the philosophical and scientific movements of the last few decades in Europe and America alike. The author seems equally at home whether he is dealing with Great Britain, France, Germany, America, or his own country. He moves as freely when discussing the philosophical assumptions of physicists like Helmholtz, Kelvin and Clerk Maxwell, or chemists like Duhem as he does when he is expounding or criticising the theories of professed philosophers such as—to mention only a few of the thinkers who come in for consideration—Royce, James, Rickert, Bergson, Meinong and Bradley. His statements of the theories which he criticises strike me as singularly full and sympathetic, (I may refer for examples to the account of Royce and Münsterburg in Part I., sec. ii., c. 3), and his criticisms are usually acute and to the point, and in many cases unanswerable. His style is at once clear, simple and terse. Altogether, I know of no more successful attempt to write the history of the philosophic movements which have followed on the discrediting of the Agnosticism of Spencer and of the arrogant Positivism of the middle of the last century, to indicate the connexions between the different movements, and to ascertain their permanent value. I only hope that the bad old tradition that a knowledge of German is sufficient equipment in the way of modern languages for a British philosopher will not prevent my fellow-students in this country from profiting by Mr. Aliotta's labours.

Before I go farther, I may be allowed to mention one or two minor defects which to some extent mar so excellent a piece of work. To begin with, though the general get-up of the book is, as with most Italian works on philosophy, highly satisfactory, the number of typographical errors which have gone undetected in the proof-reading is considerable. Most of them are actually obvious

and do not affect the author's sense, but there is a particularly annoying one on page 446, where an observation of M. Couturat with reference to a well-known argument of Kant for the view that geometry rests on a peculiar form of intuition, is made unmeaning by the substitution of the words *figure simile* for Couturat's *figures symétriques*. A mishap of much the same kind is that on page 438, where the author speaking of Cantor's "ordinal" definition of the continuum, gives by an oversight a definition not of the continuum itself, but of the "series of type of order ω " which enters as an auxiliary notion into Cantor's "ordinal definition," though he speaks in the next sentence of "this definition of the continuum". Whether the slip is due to haste in writing or to the accidental omission of a few lines by the printer, it should certainly be corrected when the book reaches a second edition. A more important defect, for which I cannot account, is that the exposition of Mr. Bertrand Russell's views on the logical character of geometry is entirely based on his early *Essay on the Foundations of Geometry*, no hint being given of the grave changes of view in Mr. Russell's later work. This is all the more strange because in the very next chapter, when the author comes to discuss the identification of pure mathematics with symbolic logic, Russell's *Principles of Mathematics* is constantly appealed to. Perhaps Mr. Aliotta abstained from studying the sections of the *Principles* which deal with geometry on the natural, but mistaken, assumption that they would merely repeat what Mr. Russell had said in his earlier book.

One more point, and I have done with the unwelcome business of fault-finding. In general the author is very generous in his recognition of work done in English. This makes it a little strange to me that De Morgan should not be named on page 427 along with Boole and Schröder as one of the pioneers of the new and extended "mathematical Logic," though Schröder, with his usual modesty, refers to him on the first page of his third volume as the real founder of the "Logic of relations". Joule also, I think, had some claim to be mentioned as well as Mayer in the account of the establishment of the law of the Conservation of Energy. Among the British and American philosophers by profession it is strange to find no mention of so eminent a thinker as Dr. Ward, especially as his point of view in what Mr. Aliotta calls "gnoseology" (*i.e.* *Erkenntnisstheorie*), is very nearly Mr. Aliotta's own.

The general scheme of Mr. Aliotta's work is as follows. In a brief introduction he describes the net result of Spencer's doctrine of the Unknowable, and points out that such a doctrine, taken seriously as the last word of the "intellect" about the Universe creates a direct challenge to the human mind to set up a "King Stork" in preference to so useless a "King Log". The first part of the main treatise then deals with the consequent "reaction against intellectualism in the newer theories of knowledge". There are three sections; the first treats of the beginnings of the

anti-intellectualistic movement, the second of the movement as we have since seen it "at the flood," the third of the various German philosophies in which the attempt is being made to rehabilitate intellectualism in the face of criticism. The second part of the work is devoted to a criticism of the philosophical positions involved in the newest mathematical and physical theories. The method followed throughout is to indicate the intellectual ancestry of the theories dealt with, then to expound them as much as possible in the words of their authors, and finally to submit each of them to criticism from the writer's own point of view. This point of view may be described as that of a moderate intellectualism. It is fully recognised that cognition is not the only justifiable attitude of man to his world; in fact, the writer refuses to allow that "science" has so much as a primacy *inter pares*. Science, action, æsthetic contemplation are all equally justified and equally important functions of the human mind, but so long as you are making the claim to be engaged neither in the practical work of transforming the given, nor in artistic creation, but in scientific and philosophic understanding of a given world, you must play the game you have elected to play. The "cognitive function" has an autonomy of its own which it neither can nor ought to surrender, and cannot surrender without making science an impossibility. It cannot work in shackles. More particularly, the point on which the author's criticism of the various attempts to subordinate any one of the fundamental relations of the mind to the world to any other turns is the essential distinction between sense and thought, the given and the constructions by which we seek to understand it. If you neglect the given, and declare that empirical "facts" themselves are "made" by thought, you are committed to all the faults of an exclusive intellectualism; if you try, like the empiricists and the empirio-criticists, to eliminate from your philosophy everything that is not directly "given," you have left no concepts for science to work with. Thus, in the main, the position assumed is that of Kant; the "given" percept, or, as the writer prefers to say, "sensation," and the concept, which is not, as such "given" but "constructed" on a basis "suggested" by the "given" must be conjoined, or rather, must interpenetrate, if science is to be the result. There are, however, certain points on which this doctrine seems to differ from Kant, and to differ for the better. Mr. Aliotta has no place for the Kantian "forms of pure intuition". He concedes, as I understand him, to the rationalist that the "given," in the case of Arithmetic, Algebra, and their developments, does not consist of a "manifold of sense". In our own inner life, our thoughts, judgments, etc., form a given manifold which is all that is required for the construction of the number-series, and the consequent development of all the branches of Mathematics which repose exclusively on the concept of number and its generalisations. Hence there is, at any rate, one branch of science which is purely con-

ceptual in its *data*, as well as in its methods, and for which we need postulate only a manifold of thoughts, a view which, in fact, goes back to Locke. For Geometry, on the other hand, and for rational Mechanics, it is maintained, an immediate "given" of spatial perception is indispensable, but, if I catch the author's meaning aright, this "given" must not be taken to be apprehended from the first in a "pure" form. What is given is the space-forms and relations of actual sense-perception. But this, as primarily "given" is not the material of the geometrical sciences. They deal with "pure cases," lines which are, *e.g.* absolutely straight or absolutely circular, have absolutely no breadth, and so forth. But objects like these are never given to us as actual sense-percepts. It is from seeing, *e.g.* lines which approximate more and more to ideal straightness and comparing them that, by "passing to the limit" we form the pure *concept* of what is meant when the geometer talks of a "straight line". This, at least, is what I understand by the theory, though the actual expression "passing to the limit," as descriptive of the formation of a scientific concept, occurs only once in the book. The point, then, is, in other words, that in knowledge the mind is never purely active or purely passive. It is always active, but active about a "given" object, and for this reason there is no such thing as a creation *ex nihilo* of scientific "fact". It is admitted to be true that, as both pragmatists and ultra-intellectualists have contended, the so-called "facts of science" are largely the creation of the man of science. With different apparatus, or different units of measurement, the "facts" would appear very different. But the "fact" won and recorded by experiment is itself the result of bringing theory to bear upon a more ultimate "fact" of every-day perception, and it is *this* fact which is, in the last resort, "given," independently of our subjective interest or choice, as that which must control our scientific thinking, and determine the type of an explanatory hypothesis. The induction by which the pragmatist seeks to show that facts are actually made what they are by *our* volition are vitiated by a standing confusion between these two senses of "fact". And the same criticism applies to the neo-intellectualistic views of writers like Cohen, who make thought the absolute creator of all its own data.

In the first chapter of Part I. the author points out that the same part which the Agnosticism of Spencer played in Great Britain in provoking an anti-intellectualistic reaction was played on the Continent by Positivism in consequence of the agnostic results deduced from it in Du Bois Reymond's famous lectures on the *Limits of Science* and the *Seven World-Riddles*. In the next he has an acute study of neo-criticism and voluntarism as illustrated particularly by the philosophical position of Riehl, Wundt, Fouillée, and Renouvier. The third chapter deals with the "new positivism" which inspires the scientific theories of Mach and culminates in the unfounded claim of Avenarius to have reached a theory of the

world from which all "ideal" construction is banished. We then have a study of "English Neo-Hegelianism," which, for the author, means the work of T. H. Green and Bradley. Green is regarded as significant as the reviver of Hegelian 'panlogism,' but as making an improvement on Hegel by his definitely theistic insistence that a personal supreme consciousness is required as the thinker of the system of intelligible relations into which both he and Hegel resolve the universe. Bradley's contribution, according to Mr. Aliotta, is to have reduced neo-Hegelianism *ad absurdum* by his doctrine of the self-contradictoriness of all relations. Hence with him Hegelianism "degenerates into an intuitionist mysticism," (the "mystical" attitude of mind, by the way, is just the one to which Mr. Aliotta seems to be constitutionally unable to be fair)—and he is therefore to be reckoned among the anti-intellectualists. It would hardly be necessary to observe that this last statement does credit to the writer's judgment, if it were not that some of our pragmatists have so oddly insisted for years in calling Mr. Bradley an intellectualist, and apparently deriving their notion of what intellectualism is almost exclusively from his works. In the second section of Part I. which deals with the more recent and extreme types of anti-intellectualism, we have first an examination of the various French philosophies which have a common basis in their rejection of the concept of "scientific law," and their insistence on universal contingency (Ravaisson, Boutroux, Bergson, Le Roy, Duhem, etc.), then of "pragmatism" and "humanism" as represented by James, Dewey and Schiller and finally an exceptionally valuable and full account of the German and American "philosophies of value," and their cognates (Windelband, Rickert, Münsterberg Royce). For the systematic thoroughness of the last-named philosopher the writer has a special admiration, though he puts with great force a criticism which seems to me fatal to Royce's whole doctrine of reality as being the expression of the internal meaning of an idea, as it stands. The question is how the "unique idea" of which my life is the expression "exists in God". God is held to experience the whole incommunicable inner life of every finite individual *as* that individual itself experiences it, without any such process of "transformation and mutation" as is dwelt on in the philosophy of Bradley. This gives rise to an awkward dilemma. Since the whole world of each individual's experience is, for Royce, the "unfolding" of the "content of a unique idea," we are driven to ask whether the "uniqueness" of each life still persists in God's experience of it or not. If it does, then God is a mere double of the world of finite knowers and the problem of the One and the Many recurs again within the very notion of God by which it was to be solved. If it does not, we must hold that though God knows me completely, and knows you completely, He is not the same identical self as either of us; there will be in the universe the three selves, God, you, myself. What sense is there then in the contention that

my only ground for believing in your existence is that you and your doings are part of the "unfolding" of the unique idea which constitutes *my* self-hood. In other words, one cannot be at once a Pantheist and a Theist, as Royce appears to wish to be.

The third and last section of Part I. is concerned with the contemporary German attempts to return to extreme intellectualism by denying that there is anything in the data of science beyond what thought creates for itself. The author's attack is levelled primarily against the so-called "immanence philosophy" and the pure rationalism of Cohen, but two other lines of thought also fall to be considered in the same connexion, the "new school of Fries" as represented specially by Nelson, and the *Gegenstands theorie* of Meinong. The explanation of the apparently odd conjunction of the "new" disciples of Fries with Cohen and Natorp is primarily to be sought in the fact that both parties offend equally against the critical principle of the necessity of both datum and constructive thought for science, Cohen and Natorp by attempting to exclude the "given" from science and to deduce its "matter" transcendently from its form, the Friesians by substituting psychology for the critical analysis of knowledge. Meinong and his followers, to whose importance the author is fully alive, find their place in this section on account of their belief in a science of the unreal, which is, of course, a science without given data. To the contention that pure mathematics is a science of this kind Mr. Aliotta replies by asking the question (p. 385): "The figures of mathematics are indeed never given intuitively in perception or representation, but, when we correct the imperfections of immediate experience by the help of these *precise* objects, and eliminate the errors derived from the fact of the threshold, do we then pass into the field of the non-existent? Do we not rather construct a more integral and comprehensive concept of reality?"

The Second Part of the work treats of the latest theories of mathematics and physics. The purely mathematical discussion is contained in two chapters which deal respectively with the now slightly antiquated problems once supposed to be raised for philosophers by the existence of non-Euclidean geometry, and with the claims of the students of "logistic" to have reduced all pure mathematics to pure logic. I have already said something about the author's own views on the logical character of mathematical science, but I may add a word or two as to the chief points he urges against the purely rationalistic treatment of the mathematical sciences. His position with regard to the value of non-Euclidean geometry does not seem to me altogether well defined. My difficulty is that he seems to hold two doctrines which appear, at least, incompatible. He urges (a) that there is no experimental means of establishing the truth of the Euclidean postulate of parallelism, and that consequently we must not ask whether the geometry of Euclid is or is not *truer* than that of Lobatcheffsky and Bolyai or that of Riemann.

In point of fact, any proposition of one of these systems can be transformed into an equivalent proposition of one of the others. Indeed he suggests that the whole difference is one of terminology. If you agree, he says, to call "straight" a line which Euclid calls "curved," of course you will be able to prove of your "straight line" things which it would be false to assert of Euclid's, but that is only because what you mean by "straight line" is not what Euclid meant by "straight line". The objects being different, their properties and relations will *of course* be different too. It should seem to follow that the only advantage one of the three geometries can claim is that of greater simplicity and convenience in its formulæ, and this is the view which naturally recommends itself to a mere amateur like the present reviewer. (b) But Mr. Aliotta also holds that Euclidean geometry is *more* complete than its rivals. The other geometries are "incomplete" because they cannot represent all conceivable figures and relations in an ideal space (p. 423). (*E.g.*, they "exclude the possibility of similar figures".) Hence the geometry of Euclid can, by a mere change of terminology, transcribe into terms of its own figures those of the other two geometries, whereas they, since they exclude the possibility of certain figures by an initial restriction, give us only a "fragment of geometrical space of three dimensions". More precisely the point of the criticism is that an Euclidean rectilinear figure, *e.g.* a plane triangle represents at once the limit to which the series of the "triangles" of "spherical" and of "pseudo-spherical" spaces approximate continuously as the "curvature" of their sides diminishes. The principle of rationality itself therefore demands that, in constructing our "ideal" space on the basis of suggestions derived from sense-perception, we should not stop short until we have "passed to the limit," and the Euclidean system thus possesses a prerogative over the other two. "The empirical data fall into regular series, thus indicating, so to say, the direction in which we should proceed, but thought, once started on the road, arrives at the ideal limit by a law inherent in its very nature" (p. 424). The logical significance of the criticism is that, when once it is clearly understood that the Euclidean postulates define the "ideal limit," the propositions of Euclid no longer require to be stated hypothetically as mere implications of premisses which are themselves neither affirmed nor denied, but may be asserted categorically as valid for the "ideal space" of geometry. Again the reasoning of the author seems valid enough, but what I do not understand is that in asserting this conclusion he should expressly speak of the possibility of translating the non-Euclidean geometries into Euclidean terms and *vice versa*, seeing that one of the premisses of his argument was precisely that there are Euclidean propositions which cannot be "translated".

In the chapter which deals with the modern conception of pure mathematics as a body of purely logical conclusions from initial

principles involving no indefinables nor indemonstrables beyond those of logic itself, the main point to be established is that both the conception of number and the initial concepts of geometry involve elements which are extra-logical. To establish this point the author attempts to show that the professed definitions of the natural numbers, and of numerical order in terms of purely logical constants involve a vicious circle. I cannot altogether follow his reasoning on this point. Thus it is admitted that in the proposed definition of 1, *viz.*, that "1 is the class of classes u , which are not the null-class, and are such that if x is a u and y is a u , x is identical with y ," we have the notions of "class," "member of a class" "null-class," but, it is argued, the idea of number is already concealed in the notions of "class," "class with no members" (p. 450). I am myself unable to follow the argument. When I assert that Socrates is wise or human, I am certainly implying a relation between a class and a member of it, but, so far as I can see, no notion of number or of a number is anywhere implied in my statement. Similarly it seems to me that when I simply say "such a thing as a round square does not exist" I am not answering the question "how many round squares are there?" and that, consequently, I can think of the class with no members without already possessing the notion of a number 0.

Similarly with the notion of order Mr. Aliotta writes, "order is defined by Russell and Couturat as an asymmetrical relation, and this, in its turn, as a relation which cannot be inverted, *i. e.* a relation such that the two relations xRy and yRx are mutually exclusive. But can one define the inverse of a relation without presupposing the concept of order?" (p. 451). I should have thought it obvious that one can. Surely one can think " x has the relation R to y , and y the relation \bar{R} to x ; R is a relation which cannot subsist between terms related by \bar{R} , and \bar{R} a relation which cannot subsist between terms related by R " without having previously thought of serial order at all. The assertion xRy does not imply the notion of order, nor yet does that of yRx , nor do I see that it is implied in the impossibility of the compound relation $R\bar{R}$. Each constituent of the definition seems to be capable of being understood without any appeal to the notion of "order" and all the constituents, and no others, are required to constitute order; hence the definition appears to me a good one. Mr. Aliotta seems to hold that the notion of order comes in in the very thought of the converse of a relation, but this I am unable to see. Surely I can think the two propositions, "Brutus killed Cæsar," "Cæsar was killed by Brutus" in entire ignorance of what is meant by "order".

A better case, in my opinion, is made out against the reduction of geometry to "logistic". The nerve of the argument is that the formulæ of "logistic" are ambiguous, and capable of interpretations which are not geometrical as well as of geometrical interpretations. Thus, to give an example of my own, there is nothing about the

equation $xy = a$, considered in itself, to show that it can be interpreted geometrically as the Cartesian equation of an equilateral hyperbola referred to its asymptotes as axes. It is only because I have already been prompted by suggestions contained in certain sense-data to form the concept of "ideal" spatial figures that I see that this interpretation is possible, and further, in the case of formulae which admit of no known interpretation except a geometrical one, it is only our previous possession of geometrical notions which assure us that they have any meaning at all. Apart from this previous geometrical knowledge we have no assurance, therefore, that many of the classes of entities considered by "logistic" have logical existence. On the other hand, this same previous knowledge assures us that the classes with which we are dealing have logical existence, and therefore enables us to assert geometrical truths not merely as the implications of initial hypotheses, as to the truth of which we affirm nothing, but categorically. The criticism appears to me weighty and sound, though I readily admit the uncertainty of the judgment of any one but a trained mathematician on so difficult a point.

The next two chapters are devoted to an examination of two important attempts to banish the fundamental ideas of mechanics from the physical sciences, the "energetics" of Ostwald, and the "qualitative physics" of Duhem. With Ostwald's *Natur philosophie* a trained philosophical critic has naturally little difficulty. Mr. Aliotta easily shows that Ostwald's programme begins in pure phenomenalism, though phenomenalism of a singularly absurd kind which assumes that in sensation we have a direct awareness of energy (as though, for example, it were energy and not colour and sound which our eyes and ears directly reveal to us), and then ends in an extravagant doctrine of energy as a "thing in itself," even thought being conceived as a "phenomenal" manifestation of this ubiquitous metaphysical reality. It is also urged with much force that the very mechanical concepts which "energetics" proposes to get rid of (motion and the like) are logical presuppositions of the concept of energy itself. Duhem comes off rather better, since he at least admits real and irreducible qualitative differences in nature, but, it is contended, he has given no valid reasons for his attempt to sever physics from its basis in rational mechanics. To say, as he does, that the work of the physicist is merely to express the experimentally found uniformities of nature in the most economical fashion, not to explain nature, is a fallacy of ambiguity. The physicist does not explain nature in the sense of reaching an Absolute or thing-in-itself beyond the confines of experience, but he does explain it in the sense that "physical theory with its logical apparatus puts nature before us in an intelligible form," and it is precisely by his appeal to rational mechanics that the physicist succeeds in this task. "The mistake of Ostwald and Duhem is to be found in their belief that motion can be put on a level with the other

qualities revealed by immediate experience, *e.g.* with a variation in heat, but it is easy to see that they thus confuse pure motion, which is an ideal construction of the same order as space and time, with the qualitative data which constitute the starting-point of this formation of a concept" (p. 502). Motion, in the sense put on the word in rational mechanics, cannot be dispensed with by any theory of physics, and the advocates of the "new" physics do not dispense with it in their own theories. Hence the concepts of the classical rational mechanics, though far from exhausting the content of sensible experience, will always be the necessary foundation of physics. "In every phenomenon of nature there is always something mechanical, but not all is mechanical, and hence it will always be necessary, in every branch of physics, to integrate with other explanatory concepts the universal principles of mechanics since it is they alone which present us with the universal form of physical reality which can be reconstructed *a priori*, the necessary warp for all who will to weave an intelligible world" (p. 506). In the last chapter we have a brief but brilliant examination of the tendency, so common among British men of science, to regard the construction of a working model as the supreme type of scientific explanation. Mr. Aliotta rightly refuses to accept the claims put forward for the working model by Lord Kelvin, Clerk Maxwell, Lodge and others. As he says, Kelvin offers us a whole series of models, each incompatible with the others, to illustrate one and the same law. Other physicists moreover declare themselves able to carry on their investigations better without any appeal to such visible and tangible models. And when the model is constructed, it is not the structure itself, but the meaning which the physicist who made it reads into it which is the "scientific explanation". One of Kelvin's models would suggest no explanation of anything to any one entirely devoid of the concepts it was devised by Kelvin to illustrate. Thus the predilection of British physicists for such models merely proves the unusual frequency in our country of persons who cannot think without the help of visual percepts or images. Such persons commit a natural but obvious fallacy when they confuse the imagery which sustains conceptual processes with the processes themselves, as was done *e.g.* by Kelvin when he declared himself unable to conceive the electro-magnetic theory of light because he could not imagine a working model of it. Such an inability only exists for the type of thinker who cannot work without concrete imagery; for one whose thought is, in the main, imageless the difficulty is non-existent.

The conclusion of the whole discussion then is this: "Scientific experience is not the only experience which can and ought to provide a basis for philosophical speculation. . . . Art and the life of morality are not a web of illusions, but spheres of conscious reality, . . . and philosophy must take these data also into account, if she would give us a complete concept of the world. The

contemporary lines of speculation which have emerged from the opposition to intellectualism have the merit of asserting the rights of feeling and will against the excesses of scientific materialism and the cold indifference of positivism. But . . . they have ended by falling into the opposite extreme of sacrificing the understanding to mystical illuminations, free flights of fancy, or to a narrow practical utilitarianism. To restore the fullness of conscious personality, to recognise a proper and autonomous worth in each of the three fundamental functions of the spirit by seeking their concrete synthesis in the unity of the human subject and not in any alleged domination of one function over the rest,—this is the one effectual method towards composing the secular strife among our spiritual activities" (p. 526). This task, of course, far exceeds in scope that which the author has set himself to execute in his volume, which, as he is careful to remind us, is intended to deal with the reaction against intellectualism solely from the standpoint of the "theory of knowledge".

A. E. TAYLOR.

Kant's Critique of Aesthetic Judgment. By JAMES CREED MEREDITH, M.A. (N.U.I.), Sen. Mod. (T.C.D.) Oxford: At the Clarendon Press, 1911. Pp. clxx, 333.

As is indicated by the subtitle, this work is a translation of the *Critique of Aesthetic Judgment*, accompanied by seven introductory essays, notes and analytical index. The headings of the essays are: I. Problem of the Critique of Judgment; II. Last Stages of the Development of Kant's Critique of Taste; III. The Beautiful; IV. The Sublime; V. Interest in Beauty; VI. Art and the Artist; VII. The Dialectic. Mr. Meredith himself draws attention to the fact that these essays 'are not introductory in the usual sense of the word'. Beginners will not find them an introduction to the critical philosophy, for they presuppose previous acquaintance with that system and especially with the Critique of Judgment. They form, as it were, an exegetical treatise, which demands constant reference to the text. They are in no way intended to take the place of a study of the Critique itself, but are mainly directed to solving difficulties which must necessarily arise for every earnest student of the original. In this way Mr. Meredith has succeeded in throwing light on many of the finer shades of Kantian thought, and in proving that despite the abrupt transitions, apparent irrelevancies and obvious want of connexion, the æsthetic doctrine of Kant is really an organic whole. Thus singularly few passages of any importance have escaped his searching analysis.

There can be no doubt of the ability with which he has performed the task which he has set himself. In Kantian exegesis agreement

is hardly to be expected; but though the reader may not be able to accept all Mr. Meredith's conclusions, he will invariably find the exposition stimulating. Though possibly a Hegelian at heart—hints pointing in that direction are not altogether wanting—he is not in the least hurry to make the 'transition'. In method, in doctrine, and in spirit the third Critique occupies the same critical standpoint as the other two. From 1781 onwards, Kant never looked backwards either to Dogmatism or to Empiricism—the one important change which his views underwent was the recognition, which came upon him very gradually, that it was possible to discover *a priori* principles in connexion with the faculty of feeling. He may have sighed for, and even personally believed in, the "higher synthesis" and the "intellectual intuition," but he always steadfastly refused to look upon these as anything more than regulative ideas, holding that his evidence never warranted him in making the required leap. The fact that Mr. Meredith is quite clear on the point that the three Critiques are all of one piece gives the work its great importance for English readers. It is the first detailed study in English of the *Critique of Aesthetic Judgment* for its own sake.

But the development of Kant's thought was, as usual, very slow. This is made abundantly clear in the second essay, where a close examination of the letter to Reinhold of December 28, 1787, shows that most of the *material* was ready by that date. Matters were different, however, so far as the *form of exposition* was concerned. In this connexion an interesting conjecture is put forward "which is opposed to current assumptions. Kant is thought to have written the *Critique of Judgment* from the first section to the last in a continuous, straightforward, and regular manner." From this view Mr. Meredith dissents. His conclusions are briefly these. The present form of the *Analytic of the Beautiful*, with its analysis of the judgment of taste into the well-known four moments, is an afterthought, which only occurred to Kant after he had written § 59, where he deals with Beauty as the Symbol of Morality. Although disinterestedness, universality and necessity were recognised from the first, they were not expounded in the formal manner which they subsequently received, and finality apart from end was originally the principle of the judgment of taste. Hence §§ 2-8 and §§ 18-22 are to be looked upon as an interpolation added to the original draft, with the result that the *Deduction of Pure Aesthetic Judgments* (§§ 30-38) appears full of repetitions. "The suggestion that the division of the Analytic into four moments corresponding to the four kinds of categories was an afterthought is by no means one that recommends itself at the first view." But all the material of the suspected paragraphs makes its appearance again, and as if for the first time, in §§ 30-38; except in one passage which is itself open to grave doubts, no further reference is made to the fourfold division, even where such a reference was

to be expected. Mr. Meredith has no hesitation in holding that the cumulative effect of these and similar arguments is to prove his thesis.

It seems to us that, if anything, he has understated his case. Kant was most unfortunate in attempting to connect the four moments of the judgment of taste with the table of categories. *Grammatically* the judgment of taste is built on the same lines as the logical or cognitional judgment—in both we have a subject and predicate connected by a copula—but actually the two kinds are *toto cælo* distinct. In the cognitional judgment the subject and predicate are bound together by means of one of the categories; but in the case of the æsthetic judgment there is no such connexion—in fact there is no categorised predication about the subject at all. To compare, for instance, the moment of quantity of the æsthetic judgment with the category of quantity, or even with the universal judgment of Formal Logic is obviously absurd. The four moments were intended, as Mr. Meredith points out (li. seq. and note to p. 45), “to formulate the conception of a pure æsthetic judgment as one completely distinct and *sui generis*”. They thus give expression to its ‘two peculiarities’; “that it has universal validity *a priori*, yet without having a logical universality according to concepts, and secondly that it has a necessity, . . . but one which depends on no proofs” (§ 31). They also mark it off clearly from the cognitive, ethical and hedonic judgments.

Mr. Meredith is correct in saying that the *Analytic of the Sublime* follows a radically different plan from that of the Beautiful. But I cannot agree with the statement that the “treatment of the Sublime is predominantly psychological in character”. As a matter of fact a much closer adherence to the table of categories is to be found here. The Sublime is divided after the analogy of the well-known division of the categories into the Mathematical and the Dynamical. In the *Critique of Pure Reason* the nerve of this distinction is to be found in the fact that the former, as extensive and intensive quantity, have to do with the Synthesis of the homogeneous, the latter with that of the heterogeneous manifold and the relation of objects to each other and to the mind. The analogy becomes still more striking on a consideration of the antinomies connected with each class. The ideas connected with the mathematical categories are those which are operative in the case of the mathematically sublime; and the same holds true *mutatis mutandis* for the dynamically sublime. Again the whole treatment of the mathematically sublime follows the ‘moments’ of the category of Quantity; Unity (the measure), Plurality (the amount) and Totality (the whole) (*Prolegomena*, § 21). We have here, therefore, an entirely different treatment from that of the ‘four moments’ in the case of the Beautiful. This, no doubt, is in favour of Mr. Meredith’s contention that the latter was an interpolation. Yet the implied censure on Kant (p. lxxxix), that

Quantity, Quality, Relation and Modality do not in his treatment apply to each kind of judgment on the Sublime, is scarcely just. It was natural, though perhaps not necessary, that Kant should limit the categories Quantity and Quality to the case of the mathematically sublime, and make no reference to them for the dynamically sublime, but I think that it is clear that the *four moments* of the æsthetic judgment, disinterestedness, universality, finality apart from end, and necessity, are all applicable to each kind of judgment on the sublime.

It is, however, in his attempt to unravel the train of thought which is really operative in the *Critique of the Æsthetic Judgment* that Mr. Meredith makes his most important contribution to the interpretation of Kant. Kant, according to him, is a most dramatic and artistic writer, who never gives out more of the truth on any particular occasion than that occasion demands. Hence it is only at the very end of his exposition that we grasp what he is really aiming at. Now the real sequence of thought in the *Critique of Æsthetic Judgment* is not that which might at first sight appear, but something like the following. Kant arrived at "his distinction between the pure judgments upon the Beautiful and the Sublime by his usual process of abstraction and refinement of analysis. First contemplating the concrete unity of the beautiful work of art, in which all factors or elements are presupposed, he seems to arrive at the distinction between judging and producing. . . . Relatively to the judgment of taste the object estimated is always a *given* form. . . . Hence in the *Analytic of Taste*, Kant not alone abstracts from all content so far as it is the product of art, but he selects as the typical cases of beautiful forms those that relatively to art are *given* or immediate. . . . On the other side the simplest case of production is where the object is formless, and where, therefore, no finality is supposed on its part; and where, on the other hand, finality is developed in a mere act of judgment." Both of these elementary factors are then analysed after which "Kant proceeds to a Deduction of the judgment of taste and does so as a preliminary to the consideration of those concrete cases of beautiful objects which are complicated by the factor of a finality of the subject, answering to the concept of freedom, but which are only thus complicated by combination with what requires no Deduction in respect of its function" (lxxiii). "The judgments upon the beautiful and sublime, abstractly considered, are the respective points of departure for two lines of critical investigation dealing with the component factors of . . . a product composed with soul and taste" (lxxxv). Thus "beauty may be considered quite formally, as the object of the mere critical judgment, and thus as opposed to the sublime; or it may be considered in the concrete as the expression of æsthetic ideas, in which case the factor that first made its appearance in the judgment upon the sublime is allowed its full importance". According to Mr. Mere-

dith, then, the sections on art, instead of being an afterthought, as some critics suggest, would seem to be the kernel of the whole work. It is therefore only fitting that it is in the treatment of Genius and Art that Kant 'at last shows his hand' (note to p. 183) by defining "Beauty (whether of Nature or of Art) as the expression of æsthetic ideas". Thus even in the case of nature if we examine the content of the object we must recognise the interest of Reason. It is Reason in fact 'that gives imagination that freedom in which it harmonises with the understanding' (lxxxvi). Beauty cannot in fact be found in mere nature, 'but only in nature regarded after the analogy of art, so that it becomes the mouth-piece of spirit and speaks to us frequently in its beautiful forms' (cv). There is in fact a necessary advance in thought from the first moment of disinterestedness to the *sensus communis*, from this to the consideration of the empirical and intellectual interest in the beautiful, from this latter, since what Kant disparages is not art but the intellectual interest, to art, until finally we come to Beauty as the symbol of morality.

The view thus put forward is supported with a wealth of argument, which can only be hinted at here. "The interpretation may seem far-fetched but it has the merit of introducing clearness into Kant's account as a whole." It is first introduced to provide a satisfactory basis for the division of the *Analytic* into the *Analytic of the Beautiful* and the *Analytic of the Sublime*. Mr. Meredith rejects that put forward by Kant in the Introduction, section vii., on the ground that 'susceptibility to pleasure arising from reflexion on the forms of things (whether of nature or of art)' can only refer to the Beautiful, and cannot therefore form the required *fundamentum divisionis*. Again the view put forward is necessary to explain the position of Art in the Critique, unless we assume that the consideration of art was introduced capriciously "hot-foot upon a section which completely depreciates its significance". But this cannot be the case for it is only in the sections which deal with art that the difficulties left outstanding from the Deduction of the *Æsthetic Judgments* are finally solved.

Now, whatever conclusion may be come to in reference to the correctness or incorrectness of this exposition, there can be no doubt that the thorough examination to which every important passage bearing on the point is subjected can only help to a deeper and more thorough understanding of Kant. But notwithstanding the severe strictures which in this volume are passed on the 'Hegelsing' interpreters of Kant, the development of thought here suggested reminds me of nothing more than of the grand march from Being to the Absolute. As Mr. Meredith says, the difficulties of understanding the *Critique of the Æsthetic Judgment* "arise from the fact that so many different points of view have been opened to us that we feel at a loss where to throw the chief emphasis". Now, notwithstanding the subtle ability and intimate knowledge of

the subject-matter which Mr. Meredith brings to bear on this question, I cannot help thinking that he has thrown the emphasis on the wrong place. In justice to him, however, I again desire to call attention to the fact that within the limits of a review I have been able to give only the baldest outline of his train of reasoning. Personally I have never been able to appreciate or notice that dramatic character of Kant's writing to which he calls attention. To me it has always seemed that one of the chief causes of the misinterpretation of Kant is due to his incurable tendency to anticipate. In this he presents a striking contrast to Hegel. Thus in the *Critique of Pure Reason* one of the principal causes of the misunderstanding of the Transcendental Æsthetic has been Kant's impatience to deal with mathematics and to introduce the distinction between phenomenon and noumenon. Furthermore, Kant undoubtedly got his bent to the *Critique of Judgment* from the æsthetic side, but it does not seem to me that Mr. Meredith has done justice to the extremely formalistic and architectonic character of his thought. The *Critique of Judgment* is the triumph not of genius (in Kant's sense) but of logical and systematic thinking. The astounding fact is that the man who cites "Die Sonne quoll hervor, wie Ruh aus Tugend quillt" or even the passage from the Great King—in this latter case we certainly have no pure æsthetic judgment!—as examples of poetic perfection, and who yet can have had personal experience of no other kind of fine art except poetry and literature, should occupy the position in æsthetic literature which Kant does. But the main question he attempted to answer was not what is Genius, or what is Art, but how are synthetic judgments *a priori* possible for the faculty of feeling. To answer this question, Kant applies exactly the same method as in the *Critique of Pure Reason*. There the procedure, e.g., was to show that Mathematics or Natural Science rested on presuppositions which could be otherwise proved, *viz.*, by reference to the possibility of experience. Similarly here, when Kant requires the *sensus communis* he does not attempt to prove its existence psychologically or by an appeal to experience. The claim to universal validity put forward by our judgments of taste presupposes a *sensus communis*. Have we any other reason for assuming such a sense except that it is necessary to substantiate this claim? Yes, it is involved in the communicability of our everyday experience. Once this is shown, as it is in § 21, the main problem which Kant set out to solve is satisfactorily disposed of. True, all that Kant has established is a *normative necessity* for the agreement of all, but that was all Kant ever undertook to prove in any of his Critiques. The question as to how far this necessity is actual, or how far men really exercise this faculty is not one for the critical philosophy. The problems which Kant raises in § 22 have to do with this latter question, and it is only natural 'that Kant nowhere definitely answers' them (lxvii).

But though art does not occupy the central position in the *Critique of Aesthetic Judgment* that Mr. Meredith assigns to it, yet he is quite justified in refusing to consider it a mere after-thought. In his efforts to set up a norm of the pure æsthetic judgment, Kant has left singularly few objects to which it can apply. Yet for most of us it is art and not ornamentations *à la grecque* that arouse our interest. If Kant could only prove beauty for the few objects left to the pure æsthetic judgment, he would have done very little to solve the æsthetic as distinct from the critical problem. If, then, Kant's account of Beauty, as finality apart from end, is correct, how can the product of human purposive activity be regarded as beautiful? It is in order to solve this question that the doctrine of Genius is introduced.

Many other problems of deep interest to the student of Kant are discussed in these 'introductory' essays. Apart from these exegetical questions there are some excellent expositions of Kant's views. The account of the Genius, his restrained originality and his relation to his time, seems particularly good. In fact the opening essay, which deals with the point of view of the Critical Judgment, is the only one that can be considered as in any way disappointing.

The notes also contain some excellent suggestions regarding the critical philosophy, as for instance where the hypothesis is put forward that the framer of a concrete ethical system must possess something of the character of the artistic genius, or where an earnest plea is made for the 'critical' as distinguished from the psychological consideration of the laughable. But the bulk of them is given over to quotations from Kant's British predecessors. From these it appears that the *details* of Kant's treatment were nearly all anticipated. But this does not detract from Kant's greatness, "for the supreme merit of his æsthetics lies in the fruitfulness of his point of view, the comprehensive survey which it enabled him to take of his subject, and the systematic connexion of his account as a whole. . . . No single writer was able to say a fraction of what Kant said, for they lacked a comprehensive point of view from which to co-ordinate the different aspects of the subject and bring them to a common focus" (xxii). This once acknowledged, the question of how much or how little is to be included in the notes becomes mainly a matter of taste. But they at least serve Mr. Meredith's purpose of showing that there is a psychological as well as a critical side to the question. The translation seems very carefully done; it is always smooth, and sometimes, no easy matter when dealing with Kant, even elegant.

J. M. O'SULLIVAN.

A Philosophy of Social Progress. By E. J. URWICK, M.A. (Oxon.), Director of the School of Sociology, London; Tooke Professor of Economic Science, King's College, etc. London: Methuen & Co. Pp. xii, 297.

THIS is a work of considerable interest and value. It may be doubted whether there is any book from which a clearer view can be obtained of the general nature of a philosophy of society, as distinguished from descriptive and empirical sociology. The author's general conception of this distinction is indicated in the following statement (pp. 6, 7). Science 'is concerned with causal processes; traces these wherever discoverable, and states them as laws for us to use as best we can. But philosophy deals with the *significance* of the processes and their results in relation to an ideal scheme of life. Any set of our activities may be treated scientifically, with greater or less addition to the sum of useful knowledge; but no set of our activities can be *interpreted* by science if it forms part of our struggle towards an ideal which gives their significant quality to the activities. Social philosophy attempts this interpretation; and for this reason we separate it very distinctly from science, and ally it with religion; for it involves a strong conception of a master aim and master plan of our life; a fervid idealism is the core of it; its essence is to lay hold of a dream of a City of God; and to make all its reasonings, all its linkings of effect to cause, all its groupings of change under the laws of sequence or causation, dependent from beginning to end upon the spirit and purpose of the dominating ideal.' Again he says (p. 23): 'Scientific knowledge is decisive and authoritative in regard to action when the end in view is definitely known and capable of clear definition. For the man who wants to build a bridge or cure a squint the science of the mechanician or of the doctor is rightly dictatorial. But for the individual who wants to improve his lot, or for the society which wants to reach a better social state, there is no such science. In social life there are no definite, limited, clearly definable ends, for all ends or aims, even those which seem most obvious and certain, are relative to the indefinable and ever-changing general ideals by which we are animated, and derive their qualities and their significance from these.' 'What then?' he inquires further (p. 36); 'Can a social philosophy perform the impossible for us, though science must fail? By no means; but what it *can* do is just this: it can take the *socius* or citizen, and explain what is involved in his membership of the whole social group or any part of it, in his relations to other members, in his connexion with each of the institutions which help to give meaning to his actions.' 'A social philosophy cannot tell us what to do, but it can tell us very clearly where social duty lies, and how attached to social facts; it can never tell us how to be happy or well-off—cannot, indeed, define the content of the end to which we give the name of happiness or well-being; but it can

render explicit the general conditions upon which any valid ideal must rest.

After giving these general explanations, however, Prof. Urwick, instead of proceeding forthwith to discuss 'the general conditions upon which any valid ideal must rest,' turns aside rather to give an account of the various points of view from which social life may be regarded. In chapter ii. society is considered as 'subject to the forces and laws of the physical world'; in chapter iii. as 'subject to the forces and laws of organic life'; in chapters iv. and v. as 'subject to the laws of mind'; and it is only when we reach chapter vi. that it is 'considered as an ethical structure: a unity dependent upon purpose'. This method of treatment reminds one of Herbert Spencer's physical, biological and psychological introduction to the problems of ethics; but whereas Spencer was seeking to show how much light the ethical student may derive from these other subjects, it is rather Prof. Urwick's object to bring out their inadequacy as interpreters and guides. All that he says in this connexion is interesting and carefully worked out, with well-chosen and sometimes illuminating illustrations; but we do not really reach the more positive conceptions that the writer has in his mind until (in chapter viii.) he deals with 'the spiritual element in social progress, and the nature of the true individual'. The views set forth in this chapter are further emphasised and applied in other two chapters; and it is these three closing chapters of the book that must be regarded as containing the gist of its teaching.

Unfortunately, the eighth chapter is the least satisfactory in the book. A social philosophy must, it would seem, be, first of all, a philosophy. It must rest on some definite view of the universe and of man's place in it. Now, it is not easy to discover any such foundation in this book. The contention of the eighth chapter is that we have to distinguish in man's nature between the 'self' and the 'soul,' and that the latter term expresses the more fundamental aspect in his life. The 'soul' is described as being 'the true individual' which 'lies behind the self or the person, and is far more real than it'. 'He is not,' we are further told, 'in any sense a natural or social product. He does not owe his origin or original equipment to nature; he does not owe the elaboration of his equipment to society or the social process. He must, therefore, be regarded as both supra-natural and supra-social; he is the individual as a *datum*, not of this life or world at all.' 'The true individual is a soul and not a self,' 'he aspires but does not desire,' 'he is a God-seeker but not a self-seeker'.

This conception of a 'true individual' is so fundamental that one naturally looks for a definite exposition of the grounds upon which it is maintained or at least for some reference to philosophical works in which the grounds for it are to be discovered. It is very disappointing, therefore, to find that the only definite reference is to one of Browning's poems—'A Death in the Desert'—in which

reference is made to the 'three souls which make up one soul'. There is also a vaguer reference to the conception of 'Nirvāna'. Beyond this one seems to be left to conjecture how the conception of the 'true individual' is reached, and what is its exact significance. Judging by the way in which the conception is applied by Prof. Urwick, I should suppose that it has a good deal in common with the 'eternal consciousness' of T. H. Green; but evidently it has also many points of difference. Green would not recognise the distinction between a 'soul' and a 'self'; and he would regard the true individual as being essentially social. We can only hope that at some future time Prof. Urwick will explain his conception of individuality more fully, and give an account of the philosophical basis on which it rests.

In the meantime, however, the use that is made of this fundamental conception is interesting. Prof. Urwick's contention is that it supplies us with 'a criterion or test of the *worth* of any social aim or policy'. 'No aim is true which is not really spiritual—that is, which is not consciously directed to bringing nearer the attainment of the only absolutely good end, the realisation of the true individual as supreme over both society and self' (pp. 246-247). It is admitted that this is a test which it is not altogether easy to apply. 'The findings of philosophy, like the deepest teachings of religion, are the hardest things in the world to apply in detail, though their general application is so clear' (p. 259). The general application, it would seem, is that anything which diminishes the content of duty is bad; but in particular cases it is not easy to determine whether the content is or is not diminished. This is illustrated by reference to such problems as the feeding of school children, the relaxation of the stringency of the marriage contract, etc. 'The question which matters is not "What particular responsibilities shall be insisted upon?" but "How far is the consciousness of duty increased?"' (pp. 265-266). Here again we are reminded of the doctrine of Green, that 'the only good is goodness'. 'The object of all improvement is, not to give our neighbours or ourselves an easier time or a more comfortable life, but to give ourselves and them a better opportunity to develop all our personalities along the lines which lead towards the realisation of our true individualities' (p. 291). What these are, cannot be definitely ascertained: 'Progress comes from visions and the faith in them, not from any elaborate charts of social causation' (p. 287). But the uncertainty does not greatly matter; for 'what is of importance is not the reform, but the will that prompts it'. 'In the spiritual scale of values it is not the success of the treatment applied by the good Samaritan which counts for much—any more than it is the actual purchasing power of the two mites given by a poor widow; but simply the fact that the one did his best in the spirit of neighbourliness, and the other gave her all in the spirit of sacrifice' (pp. 296-297).

The objection that naturally occurs here is this. If it is simply the spirit of *sacrifice* that counts, why should not the widow cast her mites into the sea? If, on the other hand, it is the spirit of *neighbourliness* that counts, it would seem that the true individual is not unsocial. Such an objection, it seems to me, could only be met by a more thorough consideration of the nature of the true individual and his relation to the social unity. In the absence of such a consideration, Prof. Urwick's book can only be described as suggestive; but this commendation it certainly does deserve. It emphasises an aspect of human life which sociologists in general are too prone to overlook—the fact, namely, that man is not only a 'social animal,' but also a moral and religious one. But Prof. Urwick appears to oppose these aspects of man's nature to one another, rather than to reconcile them, or to bring out their essential relations. Many readers of Aristotle have felt that his account of the theoretical life is too much cut off from his treatment of the life of the citizen. There seems to be a somewhat similar defect in Prof. Urwick's conception of the true individual. But the defect is one that may yet be remedied without any sacrifice of what is valuable in his work—of which there is a great deal.

J. S. MACKENZIE.

The Problems of Philosophy. By BERTRAND RUSSELL, M.A., F.R.S., Lecturer and late Fellow of Trinity College, Cambridge. The Home University Library, Williams & Norgate. Pp. viii, 250.

A GREAT deal may be said in 250 small pages by a man who knows what he wants to say. And this little book is a work of great interest and importance. Critics of Mr. Russell may regret—I sympathise with the feeling—that views which they hold to be fallacious should be so admirably and authoritatively presented to popular readers. But we may note that the books which Mr. Russell recommends for further study are first-rate philosophical classics, and the list, judiciously brief, shows no one-sidedness. And for the rest, the only remedy is that Mr. Russell's critics should write books as good as his, if they can. After all, Wallace and Caird have had their chance with the general reader, and Mr. Russell has a right to his.

Mr. Russell explains in the Preface that he has not dealt equally with the whole field of philosophy, but has treated rather of the Theory of Knowledge, where a positive contribution seemed more readily made, than of Metaphysic, where results (so I understand him) might be more negative. Still the book presents a completer survey of his views, though of course less detailed in its departments, than he has published before. It is admirably clear both

in statement and in arrangement, and charged at every point with novel and interesting matter. My attitude to it, unluckily, must be hostile on the whole. But my hostility assumes a peculiar form. For I believe that the author's fundamental demands are just, and that his error lies in holding that they can be satisfied within the framework of his own logical conceptions, and cannot be satisfied within that which others have adopted.

I will first briefly survey the elements of the world as presented in Mr. Russell's work, and then say something of the theory of knowledge involved in the representation.

First come the data of sense; not acts of sensation, and not mental states, but what is given in and through acts of sensation.

These, however, cannot be the objects of the external world. And this incapacity of theirs infects also what one would call in current language the perceived object, such as a wooden table. The relation of perceptive judgment to sense data is discussed quite late in the book. I do not think the first three chapters recognise a distinction between the sense-data and what one calls the wooden table. In any case, the doctrine is, that neither the sense-data nor the wooden table (whether simply one with them or not) constitute the real external table.

This, known by inference from the sense-data as their cause, is a physical object, that is to say, something in space and capable of motion, but endowed with no sense-data of its own; *i.e.* I presume intrinsically and as unconditioned. For as conditioned it surely owns the original sense-data from which it is inferred. Physical objects are public and neutral, and are in physical space, which is also public and neutral; while sense-data are private and in private spaces, some of which also differ in kind (visual, tactual, etc.). The spatiality and motion of physical objects are therefore not such as we are acquainted with, but only possess relations corresponding to those we perceive. In physical space objects have only their true shapes, not the varied appearances which these shapes present to our sense-perception. (In spite of the author's strongly held principle that objects of mind need not be mental states, with which I am quite at one, I am not sure that his conviction of the privacy of sense-data and sensuous space does not rest ultimately on the notion that they are mental states. A bodily change, *e.g.*, in my eye, is not in principle private to me. Why is light so? See the treatment of light, pp. 45 and 65.)

Physical objects, then, cannot be directly known. "The actual thing which is the table is not strictly speaking known to us at all" (75).

Other people's minds, like physical objects, are not known to us directly. They can be known only by introspection, and therefore each only by its owner. Thus, *e.g.*, Bismarck alone can make the judgment of which he himself is a constituent, for to us the actual Bismarck is unknown. "When we make a statement about Julius

Cæsar, it is plain that Julius Cæsar himself is not before our minds". We are however justified in making judgments of this type, as "knowledge by description," to which I will recur.

We also know past sense-data, inner or outer, directly by memory.

There are moreover universals, defined as anything which may be shared by many particulars. They *are*, but in a world which is neither mental nor physical. Relations, doubted or neglected by philosophers—surely not by Green, who talks of hardly anything else¹—are a principal class of these.

Whatever is given in sensation or is of the same nature as what is given in sensation, is particular. Proper names stand for particulars; other substantives with the remaining parts of speech, for universals.

Through universals we have *a priori* knowledge, mathematical, logical, and ethical. All *a priori* knowledge deals exclusively with the relations of universals, and depends on the fact, discovered by reflexion, that sometimes we can see these relations as self-evident. Truths which merely state what is given in sense are also self-evident. The truths immediately known or self-evident make up our intuitive knowledge of truths, which is the source of all our other knowledge of truths. The basis of Induction is such a self-evident truth; and the theory of Induction leads from the knowledge of things to the discussion of general truths, which in one form or another occupies more than the last half of the book. But "knowledge concerning the universe as a whole is not to be obtained by metaphysics" (221). Taken quite literally, this statement seems to me precisely wrong. Truths about the universe as a whole are just, I should have thought, what philosophy can establish. Particular facts beyond scientific experience, such as a future life, or the existence of a personal God, I strongly agree with the author that it cannot establish. And I believe that post-Kantian idealists would mostly take this view. I do not mean that light is not thrown on many particular problems by our general conception of the universe.

Even from this slight outline of the system before us, is it not obvious that we have here a very strange realism, in net result closely following Locke's doctrine? Thus there is the real physical object, Locke's real essence, spatial and capable of motion, but not known to us as it is, hidden away from common perception by one veil at least, if not by two, according as the sense data are reckoned as one with or other than the object of common perception. And this latter—or the sense-data which make it up—corresponds to Locke's nominal essence composed of qualities relative to sense, and unlike their causes in the real essence. The physical object is

¹ Verbs and prepositions so far from being neglected have been a main source of categories from Aristotle downward. See Wallace, *Introduction to Hegel's Logic*, p. 371.

indeed, as I gather, meant to be defended against the further analysis into sense-data which was fatal to Locke's primary qualities, by being deprived of all intrinsic sense-data altogether. But even if this defence has a meaning (for sense-data are, surely, *ex hypothesi* conditional, so that to demand that they should be intrinsic is a contradiction) it resolves itself into a further step towards agnosticism. We are to accept a physical object apart from conditions of perception. The abstraction, that is, grows thinner and thinner. Mr. Russell is indeed eager to prove, as he thinks, against "philosophers" that a thing may be known to exist although we *do* not know anything of it. I do not think that this has been disputed. But the very differently worded formula on the opposite page (p. 68) which seems to be taken as equivalent to denying the above, beginning, "if matter were essentially something with which we could not become acquainted"—i.e. we cannot know to exist that of which we *essentially can* not know anything—this has been maintained and I think must be upheld. An old carpenter used to amuse children by saying, "Now I will show you something no one ever saw before," and cut a bit of wood in two. Certainly we could have known that its inside existed, even if it had been impossible to cut it open. But something which essentially we could not know (Mr. Russell says, "become acquainted with," but the meaning of the doctrine is deeper) is a miracle, that is, something the alleged conditions of whose existence contradict the conditions of knowledge, so that in as far as we prove it to exist, we *ipso facto* prove it not to be what it was said to be. Spence's Unknowable is the typical case in philosophy.

Nor do I see that so obvious a principle need be denied in defence of Mr Russell's physical objects or matter. They seem to be fairly well connected with experience through the obvious sense-data which they cause. But if they are to be treated *qua* isolated unconditioned intrinsic existences, then I think they must be miracles, and cannot be known to exist. And I think this isolation is what Mr. Russell desires to insist on. He hints at another way of discovering their nature; but the qualification "intrinsic" still adheres to it (p. 54) and would cause the same difficulty.

However, there are physical objects, unknown except by inference and analogy, behind a single or double veil of perceived data and objects. Besides them we have minds, directly known only to their owners, and that by introspection, and universals, placed in a world neither physical nor mental. And there are self-evident truths of mathematics, logic, and morals, which remind us of those accepted by Locke in the same subjects. The statement that empirical philosophers strenuously denied the *a priori* character of mathematics can hardly be intended to include him.

Must not a scheme of realism which leaves standing such poor fragments of our things and truths, and those so arbitrarily selected, go the way which Locke's has gone? No doubt it is better guarded

against mentalism than his doctrine was; but immediacy and detachment, the heirs of mentalism, must surely do here the same destructive work which it did upon Locke.

What we who have been trained in another school miss alike in Locke and in Mr. Russell, is the point of view of the whole. Now this, I well understand, Mr. Russell intentionally rejects. It is only possible therefore to argue by pointing out what we take to be the disasters to which the rejection leads him.

He is obsessed, we should say, for example, by the conception of Idealism,¹ according to which what appears as matter consists either of minds or of mental states. Against this he repeatedly advances the doctrine that the object of mind need not itself be mental, in this sense. Now I imagine that to post-Kantian idealists in general this position will seem obvious; but they will be inclined to hold Mr. Russell himself unfaithful to it in the spirit if not in the letter.

For why does he accept sense-data as primary factors of knowledge, and yet reject them as constituents of a real external object, unless, in spite of his own insistence that they are not acts of sensation, he retains some prejudice that as mental states they must belong to knowledge and yet cannot belong to things? I observed above upon the doubtful treatment of light. True, they are criticised as being changeable, inconsistent, conditional. But for any one who recognises the conception of the whole, which is plainly involved from the first in the perception of an object, and apart from which the sense-data are not given at all, these data are not a primary basis, independent of the object, from which it is inferred, nor are they in the least inconsistent with each other, but, on the contrary, form a system as the obviously necessary outcome of varying conditions. If we ask, which is the real colour, the real shape, etc., of the object, the answer surely is, "All of them, according to their conditions, each to each". There is only a difficulty if we ask, What is the object as intrinsic or unconditioned? This is trying to get behind the whole by abstraction, and stultifies the inquiry into reality in a world like ours. Why should the object as apprehended not be an external object, as the whole system made known to us through sense-data, unless you think that sense-data are states of mind? And if science tells us that the wooden table, being further considered, must be held to be *also* "a collection of electric charges in violent motion," that does not make it any the less a real wooden table. You may consider a tree as an aggregate of cells and fibres; and so it is; but it remains a real tree in space all the same. I certainly have no doubt whatever that the wooden table, an object constituted by all its conditioned qualities and reactions as a whole system, is a perceived physical object in a perceived space, one with my private space. And, again, I should have sup

¹ For Green's characterisation of what amounts to this view of idealism, when advanced by Herbert Spencer, see *Works*, i., 386.

posed that most post-Kantian idealists would agree with me. Of course space and spatial objects as we perceive them are not for us ultimately satisfactory before metaphysical criticism. But this would tell us more about them; it would not go behind them or deny their existence.¹ Here is one of my grounds for believing that if you want genuine hard Realism you can only get it from an idealist. Every one else picks and chooses according to some arbitrary standard, and ends by erecting a reality which leaves out nine-tenths of the facts; because he does not believe that the real is the whole.

A similar comment suggests itself on Mr. Russell's doctrine of *a priori* knowledge. His criticism on Kant's view (p. 132) is almost word for word the same as Green's.² But Green lives up to it; the question is if Mr. Russell does so. Both disown the idea of truth specially contributed by our own nature in the way of thought as opposed to the object. But Green infers from this the falsity in principle of the distinction between contingent and necessary truth, and the dependence of all truth on the whole system of experience—in short the coherence theory. Mr. Russell believes in a type and source of self-evidence dependent on isolated intuitions of relations between universals; in the "correspondence" theory of truth, which, along with his theory of the physical object as known by inference, must mean that you test one isolated inference (your belief) by another (the "fact") without criticising the two by any common standard; and in a doctrine of Induction which seem to me to combine both errors, by resting an uncritical method dependent on cumulative instances, upon an uncritical *a priori* principle affirming an increase of probability to be generated by such accumulation. This dualism of fact and *a priori* truth is not of course grounded in Kant's fashion; but it rests on a prejudice like his.

And all that is wanted for Induction is so simple. Postulate here what is postulated in the account of knowledge by description (to be discussed below), that there is a true proposition about the phenomenon in question; and further that some judgment can be formed as to the relative approximation of our knowledge to it, and the whole difficulty of uniformity vanishes. For suppose the laws of motion were going to cease to operate at twelve to-night, a true proposition about any phenomenon in which they are concerned would of course tell you so. You cannot interrogate nature except on the hypothesis that there is a truth about it, *i.e.*, that it is a whole; and Mr. Russell's view leaves the interrogation of

¹ The argument that there can be no contradiction in space, because logic has proved all sorts of spaces possible, amounts to very little. Possibility is a matter of point of view; from a very abstract point of view all sorts of impossibilities are possible. On given infinities see my *Principle of Individuality*, p. 394.

² *Works*, ii., 5.

nature entirely unaccounted for. Series of similar conjunctions are just what it does not rest upon.¹ Or again, every association indicates a law. And you cannot establish the true form of a law by accumulating unanalysed cases under the first indication of it.

In short, the Inductive principle assumed *a priori* has no connexion with the general basis of logic, and will not account for the conception apart from which actual Inductive practice would be impossible. The idea of the whole is needed for all knowledge and influences it *ab initio*, and is not an assumption but a truth revealed by analysis. And if it were an assumption or a *a priori* principle, it would be better to accept it as one which does explain Inductive practice and all cognition, than Mr. Russell's principle, which does not explain even the former, and does not profess to explain the latter.

(This notice is already too long, but there are still some important points which must be mentioned.) The chapter on Knowledge by Acquaintance and Knowledge by Description² is fundamental for Mr. Russell's position. It has the merit of raising the question what is the place of immediate experience in knowledge. And the answer given is that it forms a separate and primary type of knowledge, distinguished as knowledge of things by acquaintance from knowledge of truths, than which it is essentially simpler.

We have knowledge by acquaintance of sense-data outward and inward, of the past through memory, and of certain universals. We have not acquaintance with physical objects proper, nor with other people's minds. Acquaintance is the foundation of all our knowledge, both of things and truths. Knowledge by description is, if I grasp it, the way in which we use knowledge by acquaintance as a substitute, so to speak, for the direct knowledge of things which we have never experienced. We describe, in terms with which we are acquainted, the true proposition which we know there is,³ and which we should like to make, but with the actual object concerned in which we are not acquainted. (I cited above the instance of Julius Cæsar. We cannot speak about *him* because we have not introspective acquaintance with his mind; and even those who saw his living body had not direct knowledge of it, for it was a "physical object," still less of him.)

(This, I said, is fundamental.) No doubt our private and peculiar experience is somehow used in our knowledge of what is beyond it. Others know the same things through other private experiences. (I do not mean to admit that what we experience, *e.g.*, in sense, is not continuous with what others experience.) This is clear. But

¹ See for the true view, Green, *Works*, ii., 6.

² Cf. Locke, *Essay* iii., xi., 21.

³ This suggestion, as I said above, seems to me most important. We only have to extend it to all objects, and the system of truth rises up single and systematic against the chaos of data and physical objects and self-evident principles.

the question is how to state the connexion. What Mr. Russell has done is to separate out the supposed data from the wholes and truths in which alone we apprehend them, and to erect them into a first line of knowledge, the foundation of all other.

Now this first line of knowledge, if it is knowledge at all, is of course extraordinarily meagre. And our knowledge of the second line, which contains practically the whole of our substantive cognition, is not admitted to apply to actual objects at all. Thus between the two our awareness of truths about things falls to the ground. The first line of knowledge is of "things," but tells us no truths; the second tells us truths, but not about actual things.

Surely the error is in treating pure acquaintance, apart from judgment about wholes, as knowledge at all. It is admittedly not expressed in judgments, and I feel sure that the attempt to elicit judgments from it which preserve its alleged self-evidence must fail. (See the discussion on self-evidence of memory and perception ch. xi. I read the result differently from Mr. Russell.) It cannot be got at as separate knowledge. It is rather a factor in all knowledge, by which thought is specified to certain objects.¹ And if our knowledge is true, it is of the actual objects, systems which cannot be cut down to the terms of our acquaintance with them. It seems to me, I confess, absurd to say that only Bismarck could make a judgment of which he himself was a constituent. The self is a complex system, like other objects, and may be known from many points of view with equal grasp of its real being.

(I have already referred to Mr. Russell's well-known theory of truth and falsehood. It has a strong point in recognising that there is no objective falsehood, but that a false belief is a belief that real objects are related otherwise than as they are. It is not out of jealousy of priority, but to defend my *bona fide* belief in the kinship of robust idealism and thorough realism, that I point out what seems to me the same doctrine in Green's argument that there is no unreal world, but only mistaken judgments as to the relations of real things.² "A confusion of relations" was, as I remember from lectures, Green's short working definition of error.)

On the other hand, the point that truth is prior to coherence does not impress me greatly. What the Law of Contradiction does is just to say that truth is not self-contained in any proposition, but depends on the character of not being denied, all things considered. The appeal to non-negation is an appeal to coherence. The idea of the whole thus governs the conception of truth *ab initio*.

(The criticism of Hegel, therefore, seems to me not to meet the point.) It is really based on taking the nature of a thing to be bounded by what can be known of it through acquaintance. But the implied distinction, we have seen, is vicious, and in asserting truths you are asserting about the actual thing. You may be wrong;

¹ I am here following Prof. Stout.

² Prolegomena, sect. 23.

indeed the whole process is one of correction. That is inevitable. You find yourself in a contradiction; you must say something, and it must not be contradictory; therefore you must go farther, and contrive a reconciling truth; that is all. Plato describes the process quite clearly, and shows how it leads up to the fullest and most living concrete. Mr. Russell's interpretation of the 'Forms' I hold to be on the whole a misrepresentation, though not without support in Plato. And his limitation of universals to abstractions, excluding individuals, I take to be one of the arbitrary distinctions by which he truncates experience.

This logical error, as I must hold it to be, affects profoundly his conception of the contrasted worlds of universals and of existences (p. 156). It is a dualism which divorces the being and logic of his universe from its life and love. I cannot say how deeply I regret that such a doctrine, absolutely fallacious, as I hold, in logic, and in its general bearing a mere formulation of popular prejudices,¹ should go out to the world with Mr. Russell's great authority. The typical universal is surely Plato's *εἶδος* or his *ἰδέα*, the all-pervading pulse at once of thought and of desire. What Mr. Russell calls universals seem to me to be just the barest outlines of the sub-structure of the world, and to have a comparatively slight claim to the character of wholeness and pervasiveness which marks the true universal.

I referred above to Mr. Russell's view of the limits of philosophical knowledge. I strongly agree with it as against many theological philosophers; and I also accept in a very large measure his estimate of the value of philosophy, which seems to me very finely expressed. Only I am not sure what application he has in mind when he censures philosophies which recognise in the universe nothing alien to the Self. The ideas, say, of Plato, Spinoza, Hegel, Bradley, might equally well be described either in this language, or, in the phrase which carries Mr. Russell's approval, "the union of Self and not-Self". It would in my judgment be a very serious error to censure philosophies like these as treating the self in a way which makes it an obstacle to freedom of thought, and I am inclined to believe, as also I hope, that Mr. Russell has not committed it.

BERNARD BOSANQUET.

James Hutchison Stirling: His Life and Work. By AMELIA HUTCHISON STIRLING. London: Fisher Unwin. Pp. xii, 379.

FRIENDS and admirers of Stirling will readily acknowledge their indebtedness to Miss Stirling for this record of a life given with rare strenuousness to the advancement of speculative philosophy

¹ Cf. James' student in my *Principle of Individuality*, p. 10; James' *Pragmatism*, p. 21.

in this country and in the English-speaking world. The book is written from the inner sanctuary of the family circle, and while the story is naturally coloured by emotional intimacy with the subject of the memoir, the writer has clearly endeavoured to maintain an objective manner of treatment, and to present the narrative with as much detachment as is consistent with the reserves of kinship. The result is a biography of Stirling to some extent of the kind which one can imagine Stirling himself to have written, though without the graphic peculiarities of such an autobiography. The estimate of the significance of the various events and incidents recorded was very probably Stirling's own estimate of them; the judgment of the value and place of his work was in all likelihood the judgment which Stirling himself would have held; the philosophical conclusions, positive and negative, enunciated are in substance undoubtedly in the line of Stirling's own thought.

One might say Miss Stirling has erred more by what she has eliminated than by what she has inserted. In a biography of a scholar one looks for the inner history of the character and mind of the man, as distinct from his declared and published opinions which have already secured the attention of that part of the public interested in them. There is much less of the former and rather more of the latter than the admirers of Stirling could have wished from his biographer. In the narrative of the outwardly uneventful life of an almost solitary scholar like Stirling the main interest must necessarily lie in the detailed record of the private opinions, characteristics, or even idiosyncrasies which give vividness to the actual life and to the written portrait of the man. The main lineaments and features are, however, here drawn with considerable success, and for this the interested reader will be grateful.

Every man is said to be the focus of his environment; and this is certainly true of Stirling. It would be difficult to imagine how such a man could have lived his life outside the region of the desperate enthusiasms which constitute as they have conditioned so much of the best in Scottish character and history. With all his immense learning and uncommon penetration, the ground plan of his nature, formed and composed of national and ancestral elements, remained unchanged to the last. His sensitive, fractious independence of spirit, with its self-contained detachment, was supported by an unbending resolution of will, and pervaded by the deep religious instincts of his people. One of the main things which from the first attracted him towards Hegel was that Hegel had, "above all, reconciled to philosophy Christianity itself. *That struck.*" In opening the lectures on the Gifford foundation at the close of his career he gladly avows himself a "member of the national church" and in doctrine an "evangelical". Like many another Scotchman who has been drawn to metaphysics, he was concerned to find an Absolute that was equal to the requirements of the Confession of Faith and the Shorter Catechism, and having

satisfied his mind on the point, he was then ready to chant the words of Simeon of old with perfect confidence. Of an intense positive temperament, Stirling early in life took himself and his purposes very seriously, and was peculiarly adapted by nature for that stubborn attempt to think to the uttermost which constitutes the prevailing mood of the metaphysician. While capable to an unusual degree of laborious patient investigation, he was constitutionally incapable of resting content with a negative or half-negative result. This largely accounts for his ruthless and incessant assaults on the half-truths of the *Aufklärung*, and for his scornful contempt for the contemporary empiricism of his day. To both of these movements he probably did less than justice, because of his temperamental bias towards positive conclusions. In his philosophical antipathies he did not remain satisfied to win his case at the bar of pure reason; he pilloried his victims on a metaphor which brought in laughter to the assistance of logic, and left discomfiture to complete the work of conviction. While there can be little doubt about the feelings of the public, only conjecture can describe the emotions of Mill and Bain as they read Stirling's article in the *Courant* in 1870, with its concluding sentence: "It is quite curious to watch Mr. Mill and Mr. Bain in what they think philosophising—Mr. Mill concealing himself from his own presuppositions behind the shadowy heads of a ghostly asparagus-bunch of possible sensations; and Mr. Bain, with a sobriety of aspect that becomes the occasion, intently milking . . . his own biceps into Time and Space".

Stirling was a man of singularly versatile mental endowments, with a sinewy strength of intellectual endurance and great powers of concentration. He was familiar with most of the fields of science, and probably could have proved himself successful in any of them. It was always a legitimate satisfaction to him that he was a serious rival to Kelvin in the mathematical class in Glasgow University; and at least one distinguished mathematician has acknowledged that, in the controversy with Whewell and Robertson Smith in later years over Hegel's criticism of Newton's view of the calculus, Stirling had the best of the dispute. He had a scholar's knowledge of several languages, and a very living interest in the literature of his own country. A being with such varied capabilities must have found the problem of selecting a definite *métier* in life one of singular difficulty. In a sense one might say he never really found his peculiar sphere in any of the recognised departments of activity, and to the last remained outside all of them, imposing his own tasks and duties on himself. This is in some respects to be regretted, in other respects it was a gain; and in any case it makes Stirling's great achievements all the more remarkable. Whatever success he may have had as a doctor of medicine, there can be no doubt that the type of work most after his own heart was that of a teacher of philosophy in a University.

He took his defeat as a candidate for the Edinburgh Chair very bravely; but that was probably the disappointment of his life. His non-election showed a strange lack of sound judgment on the part of the electors, and was undoubtedly a serious loss to Edinburgh University, and to Stirling himself. Teaching would have compelled Stirling to think more simply and more concretely, and would have removed most of the transparent singularities in his style of writing which, largely owing to the isolation of his life and work, tended to take the form of a public monologue. Moreover, Stirling had a very vivid and clear insight into Ethics (the subject of the chair); his volume of *Lectures on the Philosophy of Law* (1873) is perhaps the most luminous and valuable of all his writings.

It was natural that a man of Stirling's varied gifts and resources should have thought of and tried many avenues of activity before finally settling down to the task that called forth his best energies. Some of his early literary efforts and ambitions were perhaps less due to a want of perspective than to a want of knowledge of his own real powers. His correspondence with Carlyle in this connexion is interesting mainly for the light it throws on Carlyle's good practical sense in dealing with such a correspondent. Specimens of Stirling's attempts at literature, poetical and otherwise, are given in the earlier chapters of the volume. He had no interest in literary form, as he confesses in so many words (pp. 137-138); and, while possessed of an abundance of telling, picturesque imagery, he seems never to have cared for the fine art of literary expression, and certainly cannot be said at any time to have practised it. His best and most continuous pieces of writing (the "Conclusion" of the *Secret*, and the "Reproduction" of Kant in the *Text Book to Kant*), are sustained flights of impressive philosophical exposition, and in the nature of the case do not lend themselves to adornment or eloquence in order to be effective. Such style as he may be said to have had was largely formed or fostered under the influence of Carlyle, for whom he always retained the deepest admiration from youth to old age. No doubt many of Stirling's idiosyncrasies of style are traceable to Carlyle, the Carlyle who appeared in *Sartor* and the succeeding works: and it can hardly be held that such an influence was anything but prejudicial.

It must always seem a kind of happy accident that led Stirling to undertake what proved to be his life-work—the study and exposition of Hegel and German Philosophy. There was nothing in his preceding life-history, at least so far as can be gathered from his biography, which called for a comprehensive metaphysical system to satisfy a deep-felt spiritual need. He appeared to be mentally at peace with himself when the inheritance of a competence induced him to give up professional work and go abroad to read. His religious life seems to have been securely established

very early, and does not appear to have been seriously shaken at any time. And even after his task of studying and expounding Hegel was completed, he definitely declares, "I have not sought, and do not seek, to be considered a disciple" [of Hegel] (Schwegler, *History of Philosophy*, 11th ed., p. 445). Perhaps some light may be thrown on the matter by his remark in the same context "my position in his [Hegel's] regard has been simply that of one who in making the unintelligible intelligible would do a service to the public". This, taken along with the passage in the biography (p. 115) already referred to, seems to indicate that he undertook the stupendous task which he carried to a finish, first of all to see how Hegel had "reconciled to philosophy Christianity itself," secondly in order to bring to the light of day the dark enigmas of an apparently impenetrable system of philosophy, and thirdly perhaps to gratify an intellectual curiosity of a high order. He had free time on his hands and nothing to lose by failure, if he should fail; and he had inexhaustible patience, intellectual ambition, and the indomitable resolution which refuses to be turned back once it has set its hand to the plough. He seems to have known little German before he went for the year's stay in Heidelberg, 1856-7, where the task was begun. On the whole, therefore, it seems remarkable that an undertaking, the outcome of which was of such great moment for the study of philosophy in this country, should have had its origin in such apparently contingent circumstances.

We need not rehearse here the story of the intellectual struggle through which Stirling passed before light came, and with it the secret for which he was in search. Apart from the brief references in the biography, the record of the struggle is set forth in the first five chapters of the *Secret of Hegel*. The composition of the work took a year and two months, and it at length appeared in 1865. It was received on its appearance with mingled admiration and astonishment; and as an intellectual feat it will always stand by itself in the annals of philosophical literature.

If there is a kind of genius required for luminous exposition of a man of Hegel's dimensions, then certainly the *Secret* is a work of genius. Those best know its value who have trodden the mazes of intellectual perplexity and have come to Stirling in their hour of need. No one has ever done for Hegel and for German philosophy what Stirling accomplished in the *Secret*. But it is not for every one that the book was written, nor to every one that it makes a responsive appeal. To some it has been indeed the wine of life; to many others it is the waters of Marah and wholly unpalatable. Its unattractiveness to the generality of readers even capable of understanding it, is due not so much to the difficulty of the subject, as to the manner of presenting it. Stirling after long seeking at last struck the right clue for getting at the source of his author's meaning, viz.,—the close historical connexion of Hegel with his more immediate predecessors. Stirling was never weary of laying

stress on the importance of understanding this clue, or, as he used to put it, assimilating the "Historic Pabulum". What he never seemed to realise was the equal importance of showing the intimate connexion of Hegel's philosophy with everyday thought, with common sense, and ordinary scientific and religious notions. Without this the strangeness and aloofness of the system from everyday life remained unremoved; and the historical setting of Hegel's thought, so far from bringing the system into touch with life, seemed merely to relegate it to the past and to connect it with "old unhappy far-off things" which people might as well forget. And in endeavouring to meet the reader half-way, it has always seemed unfortunate that Stirling should have done little more than reprint the notes made during his own personal struggle to understand Hegel and present these as the first five chapters of the work. Valuable as they are, these notes are mainly of autobiographical interest and of psychological significance. What was wanted by way of introduction was an analysis of the steps by which Hegel's own system arises from and is continuous with the thought of everyday experience in all its aspects. No one has ever been better equipped than Stirling for such an undertaking, and, at the time he wrote, probably no one but himself could have done it. The truth seems to be that he was so intent on getting to the centre of the system that, once arrived there, all else seemed of slight importance, and the reading public almost forgotten. He spoke from a secure vantage ground of his own, and the public was left to follow him as best it could. To some extent he sought to remove this defect in the *Secret* in his repeated restatements of Hegel's position in his later works, more especially in the most important of his latest writings, *What is Thought* (published in 1900). But the defect seems never to have been quite removed. He was so clear in his own mind about what Hegel meant that he hardly seemed to see the point of the difficulties raised by others. A crucial question, for example, was put to him by one of his correspondents, and his letter in reply (*Life*, p. 346 ff.) seems anything but a satisfactory solution of the difficulty.

It is remarkable that in the *Secret*, which professed to give the Hegelian system in "Origin, Principle, Form and Matter," so little is said about any part of the system except the *Logic*. The *Philosophy of Nature*, which has always been the danger zone for the enemy of the system, was hardly considered in the *Secret*; and much the same may be said of the *Philosophy of Art*. Stirling's most luminous exposition dealt mainly with the *Logic* and the ethical and religious aspects of the system. In the *Logic* he found the secret principle of the system, and the ethical and religious aspects were dealt with mainly by way of showing the bearing of that principle on certain recognisable concrete spheres of experience.

Stirling was never weary of explaining that the secret of the

system lay in the *Notion*, and he endeavoured with an abundance of illustration to show what this meant. His view of the principle agrees substantially with that of others who have sought to interpret the system, and Stirling's grasp of the principle has never been surpassed in penetration and vividness. But to the last he insisted that his interpretation was merely that of an expositor of Hegel. He did not profess to be convinced of the truth of that principle on its own merits. On the contrary, he frankly says (*Schwegler*, note on Hegel), "whether that notion be really the pulse of thought—that is what is still to be verified—that is what I still doubt. So long as that doubt remains I am not properly an Hegelian." It is not clear from the biography nor from his later writings that this fundamental doubt was ever removed. He says, indeed (*Life*, p. 373), that "Hegel's act is, probably, as the opening of the final seal into the consciousness of man". But to the last Stirling was more interested in expounding and illustrating the importance of Hegel's contribution, especially as against Kant and the *Aufklärung* than in criticising the value of Hegel's principle and method.

It is impossible to do even approximate justice to Stirling's writings which appeared after the *Secret*. Some of these have long been recognised as of great importance, more particularly his elaborate exposition and criticism of Kant, and his critical analysis of empiricism in its various forms. His study of Hegel had matured his powers to a degree of strength which made his later work comparatively easy for him, while his command of the history and logical resources of philosophy made him a very successful exponent and a most trenchant critic. His criticism of later naturalism, e.g. in *Darwinism, Workmen and Work* (1894), seems, however, to have created no impression on the naturalistic school, mainly, perhaps, because Stirling's mental antipathy to naturalism led him to do less than justice to its method and results and hardly even to take it seriously.

Of Stirling's own philosophical views, it is not easy to gather much that is new from the biography. He had an opportunity given to him in the Gifford Lectureship to offer his own independent contribution to the interpretation of the great questions of philosophy: but whether it be that the task by that time (1889) was beyond him, or that constructive effort was not his *métier*, in any case the result from this point of view was not considered a success. He describes his religious position in a letter (p. 319) as that of "the Hegelian Right," "philosophical Christianity from the idealistic standpoint": "I have in the *Begriff* what the ordinary man has in the *Vorstellung*, and the historical facts are common to us both". What this means in actual experience he seeks to explain in a letter (p. 321) apropos of the atonement, and in another (p. 323) apropos of the resurrection. In both cases while Stirling's *Begriff* is doubtless the truth, there seems a gulf fixed between it and the *Vorstellung*. On immortality he remarks that "the one argument is simply

the divinity of the Universe" (p. 322): and in the *Secret*: "it is no more absurd that you should be continued than that you are. That you are is the guarantee of your necessity . . . why should not the death of the body be the birth of the spirit?"

We have left no space to deal with Stirling's friendly intercourse with some of the greater minds of his time. The record of this forms a very interesting feature of the biography of one of the most remarkable men of his time.

J. B. B.

Essays in Radical Empiricism. By WILLIAM JAMES. Longmans Green & Co., 1912. Pp. xvi, 283.

THIS book consists of a collection of reprints, with a preface by the editor, Prof. Perry. Most of the essays in the volume were collected by William James himself in an envelope with the title which Prof. Perry has given to the book. Some of them were subsequently reprinted, in whole or in part, in *The Meaning of Truth* and in *A Pluralistic Universe*, but they are rightly included here in order to give as complete a view as possible of the doctrine called "Radical Empiricism".

"Radical Empiricism" is not the same thing as pragmatism or humanism: in William James's mind the two were connected, but he admitted that one might hold the one without the other. Prof. Perry, in his Preface, quotes the summary from the Preface to *The Meaning of Truth*. According to this summary, Radical Empiricism consists of (1) a postulate, (2) a statement of fact, and (3) a generalised conclusion. The postulate is that only things definable in terms drawn from experience shall be debatable among philosophers. The statement of fact is that relations between things are just as much matters of direct particular experience as the things themselves. The generalised conclusion is that the parts of experience hold together from next to next by relations that are themselves parts of experience. The postulate is not intended to rule out the possibility that there may be "transempirical" objects, but only methodologically to exclude the consideration of them from philosophy (p. 241). The statement of fact and the generalised conclusion distinguish James's empiricism from the more atomic traditional empiricism of Hume and his followers; they may, I should suppose, be now accepted as indubitable. With regard to the postulate, it is evident that its truth or falsehood must turn on the meaning given to that very slippery word, "experience". On this subject one could wish that James had been more explicit. He seems to regard "experience" as something simple, with which we are all acquainted. I cannot help thinking that, in the first two essays (which are the most important in the book), the failure to analyse "experience" has concealed important difficulties in the views advocated.

The first essay, called "Does 'Consciousness' Exist?" contends that the dualism of thought and things is an error: that the very self-same entity is at once a table and the perception of a table. The distinction between the mental and the physical, James says, is a distinction of context and function. When I perceive a table, the table is physical when regarded as part of the chain of physical causation, but mental when regarded as physically inefficacious and merely one of *my* events. There is no stuff out of which thoughts, as opposed to matter, are made; pure experience is the only stuff of the world; what distinguishes consciousness is a certain *function*, namely the function of *knowing*, which is a relation between different parts of pure experience. Locke's use of the word "idea," James says, began the tendency to obliterate the traditional dualism, and Berkeley continued it. It would be a mistake to name the doctrine materialism, or to name it idealism; both these names operate within the distinction of mental and physical, whereas with James there is an absolute identification of the mental and the physical, giving to each the characteristics of the other, making alternately the impression of materialism and of idealism, according to the context.

"What possible meaning," James asks, "has it to say that, when we think of a foot-rule or a square yard, extension is not attributable to our thought?" (p. 30). Again: "Mental fire is what won't burn real sticks; mental water is what won't necessarily (though of course it may) put out even a mental fire" (p. 33). When it comes to accounting for our apparent immediate awareness of thinking, James is ready with an answer. "The stream of thinking (which I recognise emphatically as a phenomenon) is only a careless name for what, when scrutinised, reveals itself to consist chiefly of the stream of my breathing. . . . Breath, which was ever the original of 'spirit,' . . . is, I am persuaded, the essence out of which philosophers have constructed the entity known to them as consciousness" (p. 37).

The second essay, called "A World of Pure Experience," further describes the identification of the mental and the physical, and explains what, on this theory, is meant by "knowing". There is nothing that should be called "knowing," we are told elsewhere (p. 204), in "absolutely terminal experiences," if such experiences could ever be reached. Knowing always involves two experiences (which may, however, be the same experience in different contexts), and definitely felt transitions from the one which is said to know to the one which is said to be known. The knower and the known, we are told (p. 53), (1) may be the same piece of experience in different contexts, (2) may be two pieces of *actual* experience of the same subject, or (3) may be respectively an actual experience and a merely possible experience to which conjunctive transitions would lead if prolonged.

This theory, with its rejection of the traditional dualism, is

certainly profoundly original and profoundly interesting. Its truth or falsehood, so far as I can see, does not stand or fall with that of pragmatism, though its truth would make pragmatism much more plausible. A really new theory in philosophy comes always with a shock, and I must confess that, after many efforts, I cannot conceive the facts as William James does. His hypothesis, in any case, deserves to be elaborated; and until it has grown more familiar, it would be rash to feel too sure that it is false. But, since the view has many advocates among those who owe their philosophic education to Harvard, it may be worth while to point out some objections which ought to be definitely answered, though they appear to have been entirely absent from James's thoughts.

Let us consider, for the sake of argument, the occurrence of a perception—say of a table. It is possible to take the view that the fact is constituted by *three* elements, act, content and object; or we may eliminate the content, and have only *two* elements, act and object; or we may also eliminate the act, and have only *one* element, the object. The first of these three views is advocated by Meinong, the second is the one I should advocate, the third is James's view. (When I speak of the "object," I do not mean the "physical" object, if any, which science *infers* from what is given; I mean the coloured surface which is seen.) James's arguments for his position, if I have not misunderstood them, seem chiefly effective in eliminating the "content". He seems concerned to show that the object is given without any "mental" intermediary. But if this be granted—as I think it should be—it still does not follow that there is nothing distinctively mental. To be "given," to be "experienced," is not the same thing as to "be". To be "given" or "experienced" seems to imply a subject, to be in fact constituted by a relation to a cognising act. Tables and chairs and other bits of matter might, it would seem, exist and have relations without there being any "experience" or "knowledge". James will not regard immediate perception as knowledge, though he does apparently regard it as "experience"; his reason being, so far as can be discovered, that he thinks knowledge must be round-about. Thus he does not regard "experience" as in its nature a relation, of which one term must be what we call "mental". The processes of leading, which he regards as constituting knowledge, seem to include cases which cannot be called knowledge, and to exclude cases which must be so called. He says: "To call my present idea of my dog, for example, cognitive of the real dog means that, as the actual tissue of experience is constituted, the idea is capable of leading into a chain of other experiences on my part that go from next to next and terminate at last in vivid sense-perceptions of a jumping, barking, hairy body" (p. 198). But merely holding a bone in my hand, without thinking of the dog, may have the same effect; and it seems paradoxical to maintain that I do not know the dog when it is actually present, which I gather James would have to maintain.

There are, of course, various empirical reasons of detail for supposing that what is immediately presented in sense is not the "physical" object which physics deals with. But these reasons, which may or may not be valid, are concerned with a far less fundamental problem than that which James is discussing. In considering his problem, it is simpler to concede the view of naïve realism, that the actual object dealt with by physics is immediately given. This, so far as I can see, is all that James attempts to prove. But this by no means proves that "experience" is not a relation, involving something over and above the object, something *to* which the object is given, *by* which it is experienced. It is this something, if anything, that is mental; and it is this something which James ought to have disproved. On grounds of the purest empiricism, from mere inspection of experience, I for my part should hold it obvious that perception is in its intrinsic nature a fact of relation, involving an act as well as an object. For this reason, I cannot accept James's view, in spite of its very attractive simplification of the world.

The third essay, on "The Thing and Its Relations," argues against the current idealist view that no one thing can stand in two relations. "It really seems 'weird' (he says) to have to argue . . . for the notion that it is one sheet of paper . . . which is both under my pen and on the table while I write. . . . Yet I sometimes suspect the absolutists of sincerity" (p. 105 n.). The fourth essay applies the result of the third to show that it is logically possible for two minds to know the same thing—a question also briefly discussed in the second essay, where a cursory consideration of the empirical difficulties leads to the conclusion (on grounds which seem not very decisive) that two minds can perceive at least the same *space* (p. 84), though probably not the same objects in space.

The fifth essay is on "The Place of Affectional Facts in a World of Pure Experience"; in this essay the James-Lange theory of the emotions is used to prove that they need not be regarded as purely mental. The sixth essay on "The Experience of Activity," which has already appeared in "*A Pluralistic Universe*," is very interesting; there is a beautifully clear account of the psychological experience of activity, with a rejection of any supposed metaphysical principle of activity.

The seventh essay, on "The Essence of Humanism" and the eleventh, on "Humanism and Truth Once More," belong more to the familiar field of the pragmatist controversy. The eighth, in French, on "La notion de conscience," adds little to the first two. The ninth is called "Is Radical Empiricism Solipsistic?" (the answer being in the negative); the tenth refutes "Mr. Pitkin's Refutation of 'Radical Empiricism'".

The last essay in the book, called "Absolutism and Empiricism," is much earlier in date than the others, having appeared in *MIND*

in 1884. It explains James's emotional reasons for disliking Absolutism, and is exquisitely witty. I will not spoil the sale of the book by quoting the story of the two curates at a funeral, or by explaining why Hegelianism is like a sea-side boarding-house.

The book, like everything by its author, is interesting and delightful to read, full of brilliant flashes, humour, and quick insight, but impatient of plodding careful argument or analysis. I cannot believe that empiricism, however radical, requires that we should deny the difference between mind and matter; but otherwise most of the book is such as any modern empiricist must agree with.

B. RUSSELL.

VII.—NEW BOOKS.

Life's Basis and Life's Ideal. By RUDOLF EUCKEN. London: Adam & Charles Black, 1911.

IN the German original, this book is entitled *Die Grundlinien einer neuen Lebensanschauung*. Its contents are not so much philosophy as a philosopher's reflexions on the human lot, and may well serve to popularise the author's message as a whole. The work opens with a criticism of five systems or schemes of life which may be picked out of the modern chaos. Two are old, three are new, but all fail in doing justice to self-consciousness. Other-worldliness makes the old religious system alien to the monistic tendencies of to-day, while Immanent Idealism has shut its eyes tightly to the dark facts of nature, necessity and passion. Naturalism, on the other hand, pretends to explain knowledge and love apart from psychical activity; of it we may say, paraphrasing the witty Frenchman: "If there were nothing but Nature, there would be no Naturalism". Socialism, as a philosophy of life, deifies the average man and is blind to originalities, in flat contradiction of the fact that no real advance in religion, science, or art has ever been initiated by a combination of the majority. Finally there is *Æsthetic Individualism*, claiming in equal measure to spiritualise the sensuous and to sensualise the spiritual, and banishing pain by the simple device of saying not a word about it. It has no sense for the deeper divisions of the soul. The justice and magnanimity of this criticism will be admitted by most readers. Each movement is tried by its own ideal, and allowance is made for the half or three-quarters truth which it represents.

In contrast to these divergent currents of theory, Eucken holds, there is felt on many sides "a thirst after a more forceful reality, and a more imposing immediacy of life" (p. 81). We are in a strait betwixt two, and it looks as if we had to choose between fullness of reality and inner unity of experience. Under these conditions, "no external compromise can help us, but only the winning of a transcendent position which is capable of giving to each factor its right without reduction". The only plan is to try for a new system of life. Life must be seen as reaching a solution through its own organisation and construction, its own progress and creative activity.

In the sketch of a new theory which follows, the word "life" occurs with a rather tedious and disconcerting frequency. Whole pages come of which a sentence like this is fairly typical: "All the rousing of forces, all the passing backwards and forwards between subject and object that we experience in the immediate condition of life, does not lead beyond interaction, and yields no content: it does not raise life to a self-conscious and self-determining life, so that, in spite of all its activity, our life in this condition remains inwardly alien" (p. 159). The term now and then becomes a mere catchword, and sinks into the equivalent of vitality or

movement, with the result that the distinction between the spiritual and the non-spiritual, which Eucken is peculiarly anxious to maintain, tends to be lost again. "Morals and religion," says a recent writer on Sophocles, "are to him neither the foundations nor the superstructure; they are elements or functions of the one amazing and incomprehensible thing, the one thing that matters, the one thing that is—life". It is a fathomless miracle, and Eucken would have us gaze upon it. For him there is nothing beyond life or greater than life. It is life which gives to knowledge its detailed forms, its specific character, its aims. The chief motive-power of culture is the longing for a new kind of life in contrast to that of nature.

Life, however, at its highest is "spiritual life"; and this introduces the author's pivotal and organising idea. Of this abstraction Baron von Hügel has said truly that everywhere in Eucken's writing it is treated as though in itself it were the most fruitful of realities. Apart from the permanent existence of persons there is no such thing as value, for spirituality and value are but two aspects of one reality; but we should scarcely learn this from Eucken, at all events in the decisive preliminaries of his argument. Not that the abstraction is purely formal, a kind of *Bewusstsein überhaupt*. On the contrary, the "spiritual life" is represented as independent of man, securing for him indeed a real relation to the world; it transcends all isolated individuals; it develops into a reality, a kingdom, a world, so that to partake in it is to rise into something cosmic; it is alike transcendent and immanent, and becomes polarised, so to speak, at finite centres, for "a genuine self is constituted only by the coming to life of the infinite spiritual world in an independent concentration in the individual" (p. 186). I cannot myself quite understand the relation of this "spiritual life" to what religious men call God. Apparently the relation is not that of identity, since spirituality is the element in which God lives as well as we, and epithets are constantly applied to it which mean that it is a growing, advancing and presumably imperfect entity or fact. The spiritual life, we are told, is "the self-consciousness of reality" (p. 263), yet it has to become independent of man (p. 144), and yet again religion has brought man into union with the deepest basis of reality, which presumably *is* real, and does not merely await realisation. One cannot but suspect a failure to distinguish between the Perfect Life which we believe in and adore as object and the spiritual being we ourselves enjoy. Much of the argument hinges on this ambiguity and is of dubious value for that reason. Now and then it seems as though we men were engaged in making deity.

One of the best things in Eucken's general view is his conception of history as the laboratory or workshop of the real. He rises clean above the traditional philosophic notion to which the human past is but secondary and eventually non-significant change. A very suggestive page is that (249) in which he urges that Kant's transcendental method, which Kant himself applied to science, morality, and the sphere of art, should be extended to the historical development, and should take up such problems as the intrinsic possibility of history, the conditions under which the historical manifold is unified, and the spiritual activity energising in the whole and combining the discrete elements in one. In other words, reality is not simply given but made as we live and act; yet neither is this the entire truth, for change is only of the permanent. "As the spiritual life cannot develop a content without presenting it as timeless, there is no great achievement in history that does not include some kind of timeless truth, and the movement of the spiritual life is not merely a flowing onward with time but also an elevation above time" (pp. 250-251). Stability is imparted to the human movement by the dis-

covery and appropriation of an all-embracing task which gives inner laws to life. Only in view of the future do we possess the past, and with a change in our goal the past also comes to have a changed significance. Here we find that readiness to acknowledge paradox in the depths of experience which is one of the most engaging aspects of Eucken's thought.

Eucken makes a profession of faith in Activism, but he is careful to mark it off from all mere Voluntarism and Pragmatism. Like them, Activism rejects the intellectualistic view of things, but it does not hold that of itself the will yields a new world, nor, with Pragmatism, does it take man as starting-point in the search for truth. It insists, rather, that in the quest for truth man exalts himself above himself, not receiving a given world to which mind merely plays an *obligato*, but accepting and waging the appointed warfare with confusion and irrationality, and thus imparting to life a dramatic rather than a lyric character. Victory comes as we change the centre of our own life, finding true immediacy no longer in sense-impressions, but in self-determined activity. From this point of view the problem of thought and of religion is the same. Both, confronted with the inexorable "either—or," must choose between the ideal of passiveness and of spontaneity. "Either the power of a new world is operative in man, and makes him strong outwardly and inwardly, or the whole life of man is spiritually lost—one great illusion, one great error" (p. 331). Spontaneity must be chosen if there is to be progress, and religion has proved itself man's best friend by its steady witness to the fact that our transcendent relations are such that new beginnings, implying real alternatives, are genuinely possible.

If any one feels this vague and lacking in what may be called philosophical technique, I can only say that the book itself makes precisely that impression. An opaque and elusive air broods over Eucken's work. It is questionable whether in these later books which pour so rapidly from the press he is adding much of consequence to the teaching of the great books which made him famous—the *Lebensanschauungen der grossen Denker* and the *Grundbegriffe der Gegenwart*. But in spite of the obscurities and reiterations of the present volume, it ought to carry his message abroad to a wide circle.

The translation is only fair, and might easily have been better. Its general accuracy need not be called in question, but it cannot be said to be written in a flowing or idiomatic English style. As the translator invites correction, the following infelicities may be noted here: "This we cannot do without raising the problem of our relation to reality, and, if it is in any way possible, to mould the relationship in a new way" (p. xxi); "we were led to the view that the object appeared different because we ourselves placed something different into it" (p. 106); "primarily necessarily" (p. 189); "to remove us from a happening between things to their fundamental happening" (p. 135); "the highering of the ideal" (p. 341). One feels the German far too plainly through English of this kind: "A whole sphere can be withdrawn from the confusion and used to overcome it just as little as can a single leading point" (p. 94). To a careful reader, however, the translation will convey the thought of the original, and Mr. Widgery has written a useful if brief introduction.

H. R. MACKINTOSH.

Modern Science and the Illusions of Professor Bergson. By HUGH S. R. ELLIOT, with a Preface by Sir Ray Lankester, K.C.B., F.R.S. Longmans, Green & Co. Pp. xix, 257. Price 5s.

Sir Ray Lankester in his preface to this book is very scornful of metaphysicians, and very indignant with some of us for the "ingenious and systematic advertisement" by means of which we have misled "a section of the English public" into the belief that M. Bergson is a "great French philosopher". In his view a metaphysician is a curiosity or monstrosity without any claim on that account to the title 'philosopher'. He thinks us for the most part harmless enough, amusing ourselves by blindly groping for a factor x outside the mechanism of Nature. He is greatly pleased with the old gibe against metaphysics that it is like "a blind man in a dark room hunting for a black cat which—is not there!" He does not tell us who the "keen thinker and great lawyer" is who "not long ago" made this comparison, but the new version of this venerable joke which substitutes hunting a black cat for looking for a black hat, is hardly an improvement, for unless all electro-magnetic disturbances are supposed excluded from the dark room there is no absurdity in looking in it for the black cat. But this subtlety will probably only bring down fresh scorn from the anti-metaphysician.

Mr. Elliot is not so scornful as his introducer, but he is quite as confident. "The attitude maintained throughout this book is that metaphysics is a maze of sesquipedalian verbiage, beyond the reach of science to defend or to refute". Now if Bergson were merely a metaphysician, we are given to suppose, he would not be worth refuting, but he claims to be, and some dazzled and misguided enthusiasts think he is, a philosopher, and hence the need of Mr. Elliot's book. To examine this claim and strip from it the metaphysics is the author's task. This metaphysics consists of words, often, Mr. Elliot allows, eloquent and fine words, but still only words. They have no meaning and their only purpose is to give an atmosphere of incomprehensibility. Unfortunately, "the public, supposing that there must be something behind these fine words, gasp with admiration, and blindly worship the putative wisdom of the latest Delphic oracle". When "the cloud of words carrying with them no real meaning" is swept away, the barrenness and baselessness of the philosophy is revealed. Mr. Elliot has therefore given us an "exposition of the philosophy of Professor Bergson," and considering how distasteful the work must have been, and the limitations of an undisguised prejudice against metaphysics, it is most admirably done. I cannot find any serious misinterpretation or distortion, but on the contrary a very clear and able summary of the views set forth in *Creative Evolution* and *Matter and Memory*. There is, however, an omission at once strange and unfortunate. There is no account of *Time and Free-will*. The reason for the omission is quite frankly given, the work is so purely metaphysical, so devoid of all contact with actual science, that Mr. Elliot thought no good purpose would be served by burdening the reader with an account of it. Now I have no objection to this. Bergson's philosophy is not a system of neatly fitted parts, the neglect of any one of which is fatal to the harmony of the whole. But the omission gives us an important clue to what is otherwise very puzzling in so intelligent a student and acute a critic as Mr. Elliot certainly is, a clue to the reason why he finds, not erroneous merely, but arbitrary and unmeaning, so many things that are to us the very kernel of the doctrine. A few illustrations will show what I mean. On page 63 he says, "the Professor affirms that his mental state, as it advances along the road of time, swells with the duration it accumulates, like a

snowball rolling along a road and getting bigger—a conception true to nature. He then makes use of the false analogy. For 'snowball' he substitutes 'personality'; for 'snow' he substitutes 'time'; and he thinks he gets a sort of round personality rolling along getting big with time. But unfortunately it is no longer a true conception: it is mere words, meaning nothing." Now whether Bergson's theory of the true duration is true or false, it is perfectly clear that any one who could write those words could not have understood what that theory is. Once possessed of this clue the evidence accumulates that the critic does not understand this central position of the philosophy he is criticising. The theory is difficult enough, and it is disputable, but unless it is understood, unless the critic is able to see the meaning of the words, his dismissal of the words as meaningless merely reflects his own failure. It is arguable that the "illusion" of Bergson is purely verbal, but surely not in the sense that the words mean nothing. According to Bergson we conceive change by means of the changeless, movement by means of the immobile, and from this there arises the "illusion" that change is the succession of states that themselves do not change, and that movement is the successive occupation of immobile positions. Now the standpoint from which this conception is declared to be illusion is the fact that it is not true of change and movement as we directly experience these in psychical life. You may argue that the standpoint is theoretically or practically impossible, but you must understand what is meant when the scientific conception of time is described as illusion. A still more striking instance is on page 74. "The simple reader has perhaps gulped down the stream of life with some difficulty: before getting much farther he suddenly finds the word 'psychological' put in, in an entirely unobtrusive manner. The Pecten's eye not only proves a stream of life, but proves that that stream is of psychological character. . . . It is a psychological stream, all of a sudden—and not a single shadow of fact to prove it!" The italics are the author's. His surprise is clearly quite genuine, but it shows that he has not apprehended Bergson's theory of the nature of real duration and its distinction from the spatialised time of science. Real time is psychological. The question is not whether the theory is true but whether Mr. Elliott has really grasped its meaning. Now he could not have failed to do so if he had studied *Time and Free-will* as thoroughly as he has studied the scientific theories of *Creative Evolution* and *Matter and Memory*. In saying that the stream is psychological, Bergson is springing nothing new on the unwary reader, but simply indicating that the stream is real duration. The last chapter of *Time and Free-will*, in which a most important argument rests on the psychological nature of real time, must have been quite incomprehensible to Mr. Elliott. It may be shortly stated. Time as we conceive it and use the concept in science is a homogeneous medium. Because we so conceive it, and in so far as we can so conceive it, we can foretell the future and reconstitute the past. But time as we experience it, as we perceive it in life and consciousness, as we observe it in the formation of character, is not homogeneous but heterogeneous; there is no repetition. Could then an omniscient calculator predict from knowledge of the present state of the universe and the working of its laws, what a conscious agent will do at any particular future moment, in the same way as an astronomer will calculate the position of the heavenly bodies at any given moment? Bergson's reply is that there is no logical contradiction in the supposition but an insuperable difficulty in the operation due to the nature of real time. The character of a conscious agent is formed of real time, no moment is a simple repetition of another, to know therefore what he will do at a given moment is to know his character at that

moment, and to know his character at that moment supposes knowledge of all the circumstances that have formed it in their individual details and right up to the moment of action. To know this beforehand would be indistinguishable from being this beforehand. Neither in his account of the automaton theory nor in his discussion of determinism in his last chapter does Mr. Elliot attempt to meet or even show himself aware of the existence of this very essential Bergsonian argument against the universality of mechanistic determinism. And in the conclusion he summarises his main objection to the fundamental doctrine of the first of Bergson's three volumes in these words: "Time is a stuff both 'resistant and substantial'. Where is the specimen on which this allegation is founded?" One can only wonder whether the reader will think that it really is M. Bergson and not his critic who resembles the blind man groping in the dark room.

H. WILDON CARR.

Authority: the Function of Authority in Life and Its Relation to Legalism in Ethics and Religion. By A. v. C. P. HUIZINGA. Boston: Sherman, French & Co., 1911. Pp. 265. \$2.25.

The author of this book, while vindicating the rights of the individual conscience as against excessive exercise of human authority, is yet of opinion that the dominant tendency of the times is to depreciate Authority quite unduly. He believes that in the Bible we have an infallible authority, a "perfect rule of faith and practice". To prove this is, I take it, the main purpose of the book.

The argument runs somewhat as follows: Faith is admitted by all to be indispensable to man if he is either to know or to do anything. It is through faith that we accept the laws of thought and all self-evident truths. It is faith that enables us to act, for if we were to wait till we could get complete knowledge we should never act at all. Now faith is simply "surrender to an acknowledged authority": whence it follows that "authority of some sort is involved in the conduct of life". "Authority means recognised, established power, witness, statement, command, etc., accepted and obeyed without any questioning." The Bible—which is One Book—claims to possess such authority; it "everywhere assumes sovereign right to authority over man—every man everywhere and always—to command belief and obedience"; it "presses upon all men the old alternative of life and death conditioned on immediate practical surrender to its requirements". In short it claims to be the *perfect* rule of faith and practice. Is it to be accepted as such? Yes. You ask, Why? The question is illegitimate, for if reason could sit in judgment on the claims of the Bible, the Bible could not be authoritative. The believer first grants its authority: that renders it authoritative for him and enables him to feel its authority. He must not make any distinction between one part of the Bible and another in respect of authority, because that is to claim to judge his authority. 'The Bible says, therefore God says,' is the maxim he must adopt. The hardened sceptic must do even as the believer. *Debet credere ut intelligat*. It is true that is begging the question, but in the nature of the case that cannot be helped. For the would-be believer there is in order [*sic*] the confession, 'Lord, I believe, help thou mine unbelief'. Further, though the authority of the Bible cannot be established at the bar of reason, it can be vindicated there.

(1) The most obvious criticism of this argument is that the Bible is not,

properly speaking, one book, and so cannot make any claims for itself. Nor does any of its many authors make any claim for it." Mr. Huizinga cites Revelation xxii. 18 f. in refutation of the statement, "The Bible is not a voucher but a preacher". But there "the book" is of course the Apocalypse itself, not the whole Bible. And can any one accept the assertion there made "at its face value"? Any one who does must find the critical apparatus of the Apocalypse grim reading. (Nestle's critical note *ad loc.* runs: 18 - *ἐπ' αὐτὸν Α** | *τας*: + *ἐπτα* (Qu 19 - *ἐκ Αα*.) In 2 Tim. iii. 16 (to which, however, Mr. Huizinga does not appeal in this connexion) it requires, if Paul is the writer, a very arbitrary exegesis to make *πᾶσα γραφή* (*θεόπνευστος*) mean the Bible.¹ If, on the other hand, Paul is not the writer, *cadit questio*.

(2) It is irrational to accept the Bible as an infallible authority without any questioning. Mr. Huizinga, by means of an analogy from the acceptance of the laws of thought and of self-evident truths, seeks to show that the procedure is perfectly rational. "Reason," he says, "functions in the giving of assent to Authority" and Authority, though to be accepted without any questioning or examination (*cf.* p. 167, is not to be believed blindly or at command (p. 115). It is in this way, he holds, that we accept the original data of reason and all self-evident propositions. Reason accepts them, but *by faith* and not on her own authority. This is of course a common, but surely an erroneous, view. The laws of thought are necessarily, not voluntarily, "accepted" by Reason. They are presuppositions of all reasoning and simply cannot be questioned, because any inquiry into their validity necessarily presupposes their validity. Nor are self-evident propositions which are not presuppositions of all reasoning accepted through faith. We just apprehend that they must be true, and this apprehension of necessity is not an exercise of faith, but of reason at its purest.

(3) Even if "the primordial verdicts of conscience and reason" were, as Mr. Huizinga believes them to be, assumptions, it would not follow that the Bible could be accepted in the same way as they. The Bible is not a proposition and cannot be reduced to one. There is no semblance of rationality about accepting the Bible 'on its own authority' as infallible, and it may be doubted whether any one ever has so accepted it. The question, Why in particular the Bible? is legitimate, and that means that the theory of biblical infallibility must be examined in the same way as any other theory.

(4) Mr. Huizinga maintains that the infallibility of the Bible can be vindicated at the bar of reason. It would be interesting to know on what rational grounds he could disprove a contradiction between Matthew and Luke as to the order of the temptations of Christ.

The book seems to have been put together rather hastily. One indication, among many, of this is the repetition on pages 55-56 of some dozen lines from pages 50-51. (As the repetition is not quite exact, it seems improbable that it is due to a compositor's error.) The arguments are not well marshalled, and the connexion of one paragraph with another is often hard to find. The style is throughout very bad, and however careless a man may be about his own style, he should not father a split infinitive on the English Bible (*cf.* p. 211).

W. L. LORIMER.

¹ Apropos of the words *ὡς ἐξουσίαν ἔχων* in Matt. vii. 29, Mr. Huizinga explains *ἐξουσία* as = out of (His) being!

Theodicy: Essays on Divine Providence. Three vols. By ANTONIO ROSMINI SERBATI. London: Longmans, Green & Co., 1912. Pp., Vol. I., xvii, 475; Vol. II., vii, 456; Vol. III., 102. Price 21s. net.

The appearance of Rosmini's *Teodicea*, as a three-volumed work in English, deserves a hearty welcome. Rosmini is still too little known. His work on *The Origin of Ideas* was presented in an English dress years ago. The same is true of his *Psychology*. The Compendium of Rosmini's philosophy by Davidson is, in many respects, a useful work, which its gifted author could have made better with more time and patience. A less-known work is the translation of some of Rosmini's moral and religious Discourses, which appeared in 1882. Besides all which, there is the interesting *Life of Rosmini*, by G. S. Macwalter, which was issued in 1885, and was followed by that of W. Lockhart in 1886. But the *Theodicy* awaited translation at the hands of the late Father Fortunatus Signini, to whose patient labours the present version is mainly due. The few philosophical scholars who have long been familiar with Rosmini's *Teodicea* can have no doubt that this long-deferred honour was well bestowed upon *il suo volume*. Rosmini had a keen, sharp, critical faculty; and he always saw things, philosophically, with his own eyes. Rosmini's influence has been deep and diversified; not a few Italian thinkers were lifted by his works out of religious scepticism. As the greatest Italian thinker of his time, he left deep imprint on the history of philosophy; and the roots of the Modernist movement in Italy run back to the work of Rosmini and Gioberti, as leaders of the Catholic Reformist party in the middle of the nineteenth century. The notable Italian novelist, Fogazzaro, who recently passed away, did not escape being more influenced by the philosopher of Stresa—the firm friend of Manzoni—than by any other thinker.

The first and second volumes of the work before us are made up of Essays on Divine Providence, the third volume consists of Appendix and Index. The first volume contains Book I., which is logical, being concerned with the want of logical cognitions; Book II., which is physical, as taken up with the want of physical cognitions; and Book III., which is hyper-physical, as dealing with the lack of theological cognitions, and this Book runs into and through the second volume. It seems to me that this work, taken in whole, is not so expressive of the powers of Rosmini as a philosopher as certain of his other works, but it is declaratory of his skill and attitude as a religious philosopher. It is less striking, I think, in respect of its argumentation, than of its witness to the spiritual strength and elevation of its author. Rosmini locates the difficulties of Divine Providence, for us, in the limitations of human thought or reason, and has much to say of the relations of faith and reason. He does not think natural reason a sufficient guide, but looks on reason as leading man to the need of faith, which faith, in its turn, leads him back to reason; and reason, thus encouraged and supported by faith, becomes in the end an infallible guide. My only objection is, that Rosmini seems to deal with the need of faith to reason, but, like so many writers of our own time, does not show—as I think so desirable—how faith may, and should, have, at every step and stage, the warrant of reason. It was well, however, for Rosmini's time to have had the interactions of faith and reason brought out so far as he has done. He has the old fault of being apt to glide from faith into "the deposit of faith," without the distinction necessary. He contends, however, for harmony and conformity as existing between reason and faith, and for the first principles of reason as free from error, since to overthrow or discard them would mean the self-destruction of reason.

There is some interesting criticism of Locke, Condillac, Hume, Berkeley, Pascal, and Kant, in this connexion, the sheer subjectivity of the last-named thinker rousing his particular antagonism. It should be noted that Rosmini follows the lead of Aquinas, whom he terms "the prince of Italian philosophers" (Vol. I., p. 153). Rosmini does not conceive the human mind as restricted or limited, when he treats of the limitations of human reason; but the form of the mind, "unlimited in itself, is found in a limited nature" (*ibid.*, p. 157), to which the Infinite cannot be presented. At the end of Book I. he has come to the conclusion that Theodicy has been destroyed by modern philosophy, by which he means Hume and Kant. Philosophy has made too many advances since Rosmini's time for many things here, both in form and content, to make full appeal to us to-day, but it is useful and important to have his presentation, which has still its own value, made accessible to all.

The second Book deals with Divine Providence in relation to the distribution of good and evil, and was meant to counteract the influence of Romagnosi's objections. Rosmini takes the possibility of evil to be inherent in finite natures, and seeks to prove that the spiritual good now opened for man far outweighs the evil. There is some passing criticism of the system proposed by Pope, Shaftesbury, and Bolingbroke, for the vindication of Providence. Rosmini's whole discussion in this Book is conducted with vigour, loftiness of spirit, and a complete absence of the aridity which often marks the treatment of abstractionism in such matters.

Book the third is occupied with the law of the Least Means applied to Providence. After dealing with "other and more subtle" objections, Rosmini proceeds to discuss some questions of Ontology, falling back upon the great principle of universal and indeterminate Ideal Being, which was fundamental in Rosmini's philosophy. Ideal being exists, for him, only in the real; and real being is three-fold, the simply real, the intellectual real, and the intellectual moral. Rosmini makes less of spontaneity than some present-day philosophers, for he sharply distinguishes spontaneous from moral action. After consideration of the laws of Virtue and Wisdom, he discusses the law of Parsimony or the law of the Least Means in the universe, the law of excluded Superfluity, the law of the Permission of Evil, the law of unity in God's action, and various other laws. Among philosophers whose positions are noticed in the discussion—which always carries a certain interest, though there is some tendency to diffuseness—are Leibniz, Ferrari, Euler, and others.

In taking leave of Rosmini's *Theodicy*, a substantial part of his great attempt at the restoration of Christian philosophy, I will only say that, though greater drawbacks attach to his work than I have sought to lay out in detail, yet the lasting merit belongs to Rosmini to be no mere discursive reasoner, but a possessor of the peerless gift of insight—both speculative and spiritual.

JAMES LINDSAY.

English Thought for English Thinkers. By ST. GEORGE STOCK. Constable & Co. Pp. xx, 206.

In this volume, Mr. Stock considers the writings of the three great British philosophers—Locke, Berkeley and Hume. The book, as was to be expected from its author, is written in a lucid and pleasing style, and it contains much careful exposition and some effective criticism. It was worth writing, therefore, and is worth reading. On the other hand it is

not free from inaccuracy and, to my judgment at least, the constructive part of the criticism is of very doubtful value.

As the latter question is partly one of opinion, I shall try to allow the reader to judge for himself. Mr. Stock, as a critic, adopts the standpoint of common sense. To this all honour. But if common sense is relevant to philosophy it must at least be critical common sense, and it must be able to grasp the force of opposing arguments. Let us see how Mr. Stock fulfils these requirements. "Now let us recapitulate our creed and see what it amounts to. To believe in our minds is to believe in a subject; to believe in other minds is to believe in an *eject*; to believe in space and time is—well, to believe in space and time; to believe in bodies, or, putting the same thing in a more abstract form, in matter, is to believe in an object. Every one of these beliefs was assailed by Hume's scepticism; every one of these beliefs we hold with as much vigour and tenacity as if Hume had never written." Vigour and tenacity, I suppose, are better than knowledge, but, if so, why begin to philosophy? Nor is this passage isolated. "In the notion of self," says the same chapter, "we have the sole *presented* type of substance, a something that continues unchanged under a change of accidents" (*italics mine*). This is surely an interesting and curious presentation. It is presented, one gathers, both in sleep and waking, and we are asked to believe that this desiccated and, to most of us, non-existent fragment is what the plain man means by himself.

Space, according to Mr. Stock, is more real than bodies because he can conceive space (apparently in the sense of imagining it) without bodies, but he cannot 'conceive' the non-existence of space. The principal reason why time 'belongs eminently to the domain of common sense' is that we find we have nothing to say if we are asked to explain it and want to do so. "Common sense" also "declares that colours exist in bodies and bodies exist in space. . . . It is not the business of science to deny the facts of experience, but to explain them. Experience tells us that colours are in bodies; let science inform us how they come to be there." Thy subtlety, O shade of Philonous, is scornfully rejected by this modern Hylas.

This is enough, I think, to allow the reader to form his own opinion. It is only fair to add that the critic's own standpoint is not obtruded in his running commentary, which is neither dogmatic nor unappreciative.

On the second head, that of inaccuracy, I do not wish to give the impression that the book is inaccurate on the whole. On the contrary it is usually accurate. To justify the criticism, however, I must cite instances and the three which I shall choose occur in close succession, and refer, respectively, to different authors in the British triad.

Page 123: "There are two weak points in Berkeley's system—

"1. His confining reality to sense.

"2. The precarious nature of the existence that he allowed to spirit."

These statements are inconsistent, and the first, at least, is false.

Page 124: Locke 'left the idea of spiritual substance intact and contented himself with calling that of material substance obscure'. This is a serious error. Locke's position is that the notions of spiritual and material substance are equally obscure (*Essay* II., xxiii., 5). He maintains also (II., xxvii., 10) that the question of immaterial substance 'matters not at all' with respect to personal identity. The well-known argument in IV., iii., 6, should also be remembered, *viz.*, that God may superadd thought to matter, and, therefore, that the substance of matter may also be the substance of mind.

Page 124: 'With Hume ideas of reflection were dislodged from the place of honour which had hitherto been allowed to them'. Is this in-

tended to deny the importance of the treatment of the passions? Moreover, had Mr. Stock noticed (as he did not in his account of Hume's treatment of causation) that the impression from which the idea of necessary connexion is derived is an impression of reflection, he might have expressed himself in a more guarded manner.

J. LAIRD.

The Elements of Morals. By AMBIKA CHARAN MITRA, M.A., Calcutta: S. K. Lahiri & Co. Pp. xv, 859.

The fact that several useful text-books of Ethics already exist is not by itself a good reason against the appearance of another. It may be doubted whether Mr. Mitra's book ought to supersede any of them, but it has some good qualities. It is generally thorough and well arranged. It includes a good deal in its 800 pages, and, in the majority of cases, the historical disquisitions are reasonably accurate. The quotations intended to illustrate various points frequently succeed in doing so. These merits are considerable, but they do not suffice to make the book really first-rate.

In the matter of quotations, for instance, the author has more than the usual defects of his qualities. Some, as I have implied, are apt and not too commonplace. But there are far too many of them and frequently they seem to be introduced merely for the sake of quoting something. There is no excuse for introducing a quotation which is itself second-hand, yet Calderwood is quoted (p. 54) for a simple statement of the 'Dubito ergo sum'. Indeed, one is sometimes led to the uncharitable supposition that the author is afraid to pronounce *in propria persona* on very obvious points. In the first chapter (which, perhaps, somewhat exaggerates this tendency) there are eighteen quotations covering, as nearly as I can judge, six out of the seventeen pages. No one of these quotations is drawn from writings other than philosophical, and twelve of them are quoted from text-books in common use. About a quarter of the book stands within inverted commas, not to mention those passages whose sole function is to explain the theories of others. And, to continue the arithmetic, is not sixty-three quotations from Martineau and nineteen from Calderwood's *Moral Philosophy* rather an excessive number?

Again, the author appears to me to have swelled the volume of the book unduly by the inclusion of matter which, according to his own definition, is irrelevant. Though well aware that Ethics is a normative science, he declares in an unfortunate phrase (p. 50) that 'ethical inquiry may be subdivided into two main branches, the psychology and the metaphysics of ethics. . . . The present work is confined to the psychology of Ethics.' But if the door be bolted and barred against metaphysics why include a dozen closely printed pages on Hegel's dialectic or give an account of Spinoza's ethics which summarises the argument of the whole of that work? And why compare Hegelianism, Vedantism, and Spinozism on points which are nothing if not metaphysical?

As a critic, Mr. Mitra shows an unfortunate desire to eat his cake and also to have it. I shall confine myself to one instance out of several. He has many hard words to say on the subject of Kant's rigorism. He deplores especially that on Kant's view 'progress in the moral sphere would tend to detract from the moral worth of acts' (p. 239). But what is Mr. Mitra's own account of duty and obligation? Any case of the actual performance of duty, he maintains, implies an actual (and not merely a potential) conflict between the 'higher and lower self,' between

the 'rational and irrational parts of our nature'. A saint, so far as he really is saintly, is above duty altogether, although duty is the essence of ethics. He is saved from being above morality, only because he is permitted to know what duty is, although he cannot perform it. And speaking of the merit of actions, Mr. Mitra says (p. 599): 'The greater the strain on will, the greater the merit. . . . Thus merit declines as virtue increases!'

J. LAIRD.

Liverpool Addresses on Ethics of Social Work. By JOHN MACCUNN, M.A., LL.D. Liverpool University Press. Pp. 195. Price 4s. 6d.

"The philosopher," writes Dr. MacCunn, "—the ethical philosopher at any rate—has a weakness. It is a secret longing to preach." If it is a weakness it is one which finds its counterpart in a secret longing on the part of the world in general to be preached at, always provided that the sermon is relevant and carries conviction. We can no more help welcoming the preacher who can throw light on the problems of our daily life than we can help welcoming the sun or wind which disperses a fog through which we are groping our way in semi-darkness. The particular department of life to which these addresses are directed is that of social work, including our relations with our fellow citizens, and the proof of their value may be found in the steady illumination with which they touch one after another of the problems which meet us all in proportion as we partake of the citizen life.

One of these problems which is apt to haunt more especially those who follow the more difficult paths of philanthropy is that of the value of the lives they are striving to aid. "One has only to pass in melancholy review the incurably diseased, the insane, the vicious, the paupers, the criminals, and then to put the question if the pitiful and patient care and tendance of these social failures can be justified as making the nation strong." Or, some of us may ask ourselves, can it be justified as absorbing the strength and powers which seem so often wasted in their efforts? It is one thing to love humanity in general; it is another and very much more difficult matter to love it, or to do anything less than hate it in its most degraded forms when we are brought face to face with them. The way which shines clearly enough before us when we are impelled by sympathy with misfortune, leaves us groping and uncertain when confronted with vice and selfishness; and it is then that we need such help as may be found in the addresses "Motives to Social Work" and "Justification of Motives".

But perhaps where the author shows himself most helpful at the present juncture is in his strong and sane belief in the democracy. The addresses on Democratic Education and Local Patriotism and Education witness how fully he understands both the dangers and the promise of democracy. His rebuke to the pride of intellect and the conceit of culture, which cannot understand the strength and soundness of a life which does not conform to their ideals, is as just and timely as his warning to the Democracy against thinking that majorities can solve its social problems without the aid of expert knowledge.

HELEN BOSANQUET.

Exposition and Illustration in Teaching. By Prof. JOHN ADAMS. London: Macmillan & Co. Pp. 426.

Prof. Adams has proved himself both as a teacher and a writer to be a past master of the arts of Exposition and Illustration, and this book

upon an important aspect of the teaching process is worthy of the writer's reputation.

Setting out with a clear statement of the nature and scope of his subject, the author in consecutive chapters leads up to a practical treatment of Exposition and Illustration by discussing Mental Content, Mental Activity, Mental Backgrounds, and the Conditions of Presentation. He shows that there must be a double process of analysis before a beginning can be made. First the teacher must review his own mental content so as to discover which elements are of importance for the present purpose, next we have an analysis of the pupil's mental content in relation to the matter about to be presented to him.

In deciding upon the order of presentation both the logical and the psychological sequences have to be considered. "For the teacher the logical sequence of the facts to be dealt with is the beginning of the process of Exposition; for the pupil it is the end." The problem of Exposition is complicated when the teacher is dealing not with the individual mind but with a class. "In dealing with a particular mind, we may approach it on one particular side because we know that to be the most accessible. The visual and the audile would be approached in a different way; but with a class we have to make an appeal that will meet all needs."

From page 225 to the end of the volume we find a series of valuable chapters, which should prove of real service to all classes of teachers and lecturers. "Exemplification and analogy," "the story as illustration," "material illustrations," "the picture as illustration," "the diagram" are the subjects discussed, and the problems dealt with are of frequent occurrence in all teaching experience. They are treated with that combination of wit, insight, and practical wisdom which few writers are so richly endowed with as Prof. Adams.

Illustration is shown to be a branch of Exposition. Both processes deal with the new and the old. Illustration is a work of arrangement rather than of addition. Its function is to stimulate. "It may be used not only when the deductive method is being employed, but also in an inductive way. In the latter case the illustrandum does not appear till the process is completed, but it has been in the teacher's mind throughout." The chapter on the dangers of illustration which brings the volume to a close is worth serious study. It gets to the root of several very common faults in teaching.

The style of this book is so clear, the treatment so masterly, the illustrations are so fresh and witty, that it has been a pleasure to read it.

JOHN EDGAR.

Involution. By LORD ERNEST HAMILTON. Hills & Boon. Pp. 384.

Lord Ernest Hamilton's professed object is much the same as that of Matthew Arnold in his theological writings, to exhibit the permanently valuable features of Christianity, disentangled from the superfluous accretions of centuries of "dogma" and "superstition". Unfortunately, he carries out his programme in a spirit of wholly unjustified fury against all theologians, priests and ministers, whom he seems to regard in the mass as simply deliberate teachers of that which they do not themselves believe. He has not yet learned that "iconoclastic" attacks are rarely successful unless they are accompanied by a sympathetic insight into the state of mind of those against whom they are directed. Unfortunately also, though he gives his opinions on matters of history and criticism with a singularly "dogmatic" air of finality for so violent an opponent of

"dogmas," many of them are such as to make one doubt whether he has studied his subject very seriously. Historical Christianity is hardly likely to suffer much from the denunciations of a critic who asserts, without any proof, that the writer of the *Acts* had never heard of the Virgin Birth (p. 22), or that the only "early fathers" who showed any intellectual powers were 'Paul, Jerome, Origen, and possibly Justin Martyr' (p. 27). What, one asks, of Clement, Augustine, Basil and the Gregories? How can one attach importance to a man's opinion on the historical facts of early Christianity when one finds him, again without giving any reason for so strange a view, treating Tatian, Marcion and Basilides (!) as better authorities than any of the canonical writers (p. 28), or saying that the doctrine of Atonement was "invented" (p. 32) by Augustine. (It had previously, on p. 22, been declared to be a "tactical move" devised by St. Paul, but that is no matter.) Indeed, I doubt if the author has ever even read with care the canonical books of which he has such hard things to say. He tells us on page 70 that it is the "invariable rule" in the Old Testament that the king who does "right in the sight of the Lord" is successful in all his campaigns; yet Josiah, who is recorded to have done right as none of his fathers had done, was "slain at Megiddo" by Necho (2 Kings xxiii. 30); he supposes that Babylon "joined Nineveh beneath the sand" in the reign of Darius I., though he need have gone no farther than the Book of Ezra to discover that it was a royal residence in the reign of Artaxerxes I., as, of course, it remained for many centuries afterwards; he asserts that the earliest Christians knew of no miracles worked by their Master (p. 83), and at the same time that the second Gospel contains the recollections of, and was possibly dictated by, one of the foremost of these early Christians, St. Peter (p. 110). Of St. Paul, we learn that in his Christianity there was no Messiah (p. 98)—and the expression "*Christ Jesus*," as we know, occurs on almost every page of his Epistles; that he did not connect Christ with the Passover and its lamb—and yet we know who wrote, "Christ, our passover, is sacrificed for us". Really, criticism of this kind is simply not respectable.

A. E. TAYLOR.

Early American Philosophers. Lectures on Moral Philosophy. By JOHN WITHERSPOON. Edited by V. L. COLLINS. Princeton University Press. Pp. xxix, 144.

This is the first of a projected series of reprints from the works of early American philosophers, appearing under the auspices of the American Philosophical Association. John Witherspoon, whose treatise is thus reprinted, was President of Princeton University from 1768 to 1794 and the book, accordingly, is published by the Princeton University Press. From the interesting historical introduction we learn that he spent a busy ecclesiastical career in Scotland before his departure for America, and a busy political as well as educational career during the later part of his life. Though born a Scot-man, he became a staunch American.

No exalted claim is made for the value of the books in this series: 'Much of this thinking is at least respectable, and some of it significant and important'. Dr. Witherspoon's work is not more than respectable. As here published it is only a series of synopses of lecture notes. The President wrote clearly, but his speculative powers belong neither to the first rank, nor to the second, nor to the third. In metaphysics he belonged to the school of common sense, and he seems to have thought

Beattie as good a philosopher as Reid. That was also the opinion of George the Third and further comment is needless.

Dr. Witherspoon's ethical theory is that of the later intuitionism. Like Price he seeks to base ethics on reason but he maintains that moral sense plays a real though subordinate part. His horizon is bounded by the English writings of the eighteenth century, but he is far inferior to Price or Reid. He displays considerable shrewdness in attempting to steer a middle course between the warring factions. But his arguments on particular topics are often flimsy. The denial of any instance of the legitimate subordination of veracity to other ends, the doctrine that monogamy is right because of the approximate equality of the sexes, the assertion that a man, by living in a state, consents to its government, are instances in point. Nor is the accuracy of his references to opponents or his powers of classification in much better case. It is simply false to say that Hume derided the duty of justice or ridiculed chastity. And what is the value of saying that to be either at peace or at war is the natural state of man, while being either married or unmarried is an adventitious condition?

While the book has been carefully edited it is impossible to praise the editor's methods. On the numerous occasions where the manuscript makes sense and the printed editions (probably following one another) do not, he elects to follow the readings of the printed editions and says they are wrong in a footnote.

J. LAIRD.

Psychology Without a Soul: A Criticism. By HUBERT GRUENDER, S.J.
St. Louis, Mo., and London: B. Herder. Pp. xviii, 245.

Readers who believe that souls have returned into fashion—and other readers also—will welcome the attempt to revive the scholastic conception of soul. Father Gruender is determined to be nothing if not logical: he argues clearly and incisively: he makes his points against modern psychology like an opposing counsel, and heads his paragraphs with thick-type summaries after the manner of a newspaper poster. The reader, if he is wise, must be prepared to honour large drafts on 'common sense,' to shun the 'abyss of idealism': and he will condone, although he must still deplore, cheap witticisms like 'Kant-phrases (now preferably spelled with "c").'

Father Gruender's thesis is very simple. The existence of the soul is self-evident: its simplicity and spirituality are demonstrable: and every other psychology is a kind of materialism, 'hard' or 'soft'. Thoughts exist and either require a support (as a matter of intellectual necessity) or they do not. If they do, *cadit questio*: if they do not, they themselves are substances. But even if we admit this argument, the author clearly commits a fallacy when he invites us to believe that thoughts cannot be substances because they *do not exist* by themselves. Nor is his 'demonstration' more convincing. The simplicity of the soul is proved 'by the fact that we perceive our abiding personal identity throughout our ever-changing experiences.' Clearly, if 'perception' be used strictly, this supposed fact is not a fact at all. Even if such a perceptible identical core did exist it would be far less than we mean by soul and far less important. The proof of the spirituality of soul is, negatively, that only sensation (not thought) has its corresponding brain tracts and, positively, that reason is 'essentially superior to sense'. The negative part of the thesis is tenable but can hardly be proved: and the author's argument is vitiated throughout by the presupposition that causal influence involves identity of nature. It would be interesting to know whether he accepts an obvious corollary,

viz., that so far as reason enters into free choice it can have no influence whatever upon bodily behaviour. This same presupposition, it would appear, causes the author to label all his opponents 'materialists'.

But the book is vigorous, well-informed and interesting.

J. LAIRD.

Diseases of the Nervous System. By JUDSON S. BURY, M.D. Lond., F.R.C.P., B.Sc., Vict. Senior Physician to the Manchester Royal Infirmary, Professor of Clinical Medicine in the University of Manchester. Manchester: At the University Press, 1912. Pp. xx, 778. Price 15s.

This is essentially a medical volume. The descriptions of the nervous elements are proportioned to the primary purpose of furnishing the student with a sufficient basis for diagnosis. "In teaching," says Dr. Bury, "I have always avoided the use of the terms *organic* and *functional*, and these words rarely occur in this book." This is an important innovation in such a volume. The distinction never had much foundation in anything but inadequacy of diagnostic methods, yet it is to be found all through medical books as if it meant something other than a provisional arrest of investigation. Curiously, however, the same type of idea creeps into the short paragraphs on "heredity" as a factor in the causation of nervous disease, e.g., in the words "transmission of defective vitality" and "strong tendency to tuberculous disease". If these be not of the same order of idea as "functional," it is difficult to know where they belong. This is, however, merely a verbal fault, if fault it be. The method of the book is to give the student a groundwork of sound anatomical ideas. The illustrations are very numerous and well selected.

The volume, which is No. lxxvi of the excellent Manchester University publications, covers the whole ground of nervous disease, and, to judge by some of the leading expositions, should form a sound and adequate text-book for students, whether they be undergraduates or post-graduates.

W. L. M.

Critique of Pure Kant, or a Real Realism vs. a Fictitious Idealism, in a word The Bubble and Monstrosity of the Kantian Metaphysic. By CHARLES KIRKLAND WHEELER. Boston: The Arakelyan Press, 1911. Pp. 298.

This book is perhaps worthy of the attention of modern realists as an example they can imitate but hardly surpass. The pleasing portrait of a mild old gentleman which forms the frontispiece is, however, no clue to what follows. Words fail the author at the very beginning of the Preface. "It is proposed in this polemic to show up the bubble and monstrosity of the Kantian metaphysic; its utter absurdity, its utter silliness, its utter—well, what stronger terms shall I use?" We can suggest none, but should be grateful to him for a few words on the subject of Hegel. Strangely enough, he himself does not expect to be properly understood just yet; he calls his book 'Hundredth Century Philosophy' and dedicates it to "the doctrine of our Oneness with the ONE". Perhaps, when that century arrives, he will be appreciated as he deserves, if his paper lasts so long: meanwhile it is good to know that philosophy can still stir such emotions in the somewhat anæmic 'hub of the universe'.

Aristote : La Métaphysique, Livre 1er : Traduction et Commentaire.
 Par GASTON COLLE. *Aristote : Traductions et Études*, Collection publiée par l'Institut Supérieur de Philosophie de l'Université de Louvain. Louvain and Paris, 1912. Pp. 38, 171.

If one may judge from its opening volume, the series of Aristotelian translations with commentaries projected by the University of Louvain should prove highly interesting to students of philosophy. Mr. Colle's version of the first book of the *Metaphysics* is, so far as I have tested it, usually accurate and elegant. One or twice he seems to me to miss the exact force of a word, as *e.g.*, when he renders the words *Ξενοφάνης δὲ πρῶτον τούτων ἐρίσας* at 986, b 21, by *quant à Xenophane lequel fit l'être un* . . . *ἐρίσας* can hardly mean to "make one of" a thing. Rather as *μυθίζειν* means "to go in for the cause of the Medes," so *ἐρίσας* means "to take the side of unity," and the phrase is not unlikely to be a conscious reminiscence of Plato's *σπασίωται τοῦ ὅλου*, just as "theist" means not "one who makes a god," but "one who goes in for a god," a "Goddite," as one might put it in the slang of the streets. So it is a slip to translate *ἐκεί*, when used in a quasi-technical sense of the Platonic *τόπος νοητός*, by *là-bas* (990, b 36); it should rather be *là-haut*. In general, if I had to pass a criticism on Mr. Colle's version, it would be that he has taken Christ's text, and consequently, of course, Christ's theories of the relative worth of our MSS., a little too much for granted. Occasionally I find him objecting to interpretations as "departing from the text," when they merely depart from the text as constituted by Christ.

The commentary is specially interesting because the author is at home, as one would expect, not only with the views of modern editors and expositors, such as Bonitz, Schwegler, Robin and Gomperz, but also with those of St. Thomas and the other great mediaeval Aristotelians. I should call his exposition an excellent example of Thomist interpretation modified by the results of modern research. I am not surprised that, as a Thomist, M. Colle should see the three philosophies to which Aristotle is systematically unjust, Eleaticism, Pythagoreanism, and Platonism, through Aristotle's eyes. His commentary on the chapters in which Aristotle disposes of the line of thought which begins with Pythagoras and culminates in Plato, is an admirable piece of work, so long as you admit that Aristotle's version of the principles of the "mathematical philosophers" is a correct one. This is more than I, for one, could allow. I cannot forget that the polemic against Plato turns largely on a mere confusion of the *ἀόριστος* *δύας* of the "great-and-small" (the Variable, as we should say) with the *αἰροδύας*, *i.e.* the number 2. On grounds of this kind, Aristotle's "refutation" of Plato seems to me superficial and fallacious. In fact, any philosophy of number which begins with the assumption that numbers are properties of sensible things appears to me, in the light of modern mathematics, barbarous. But it is eminently useful to have the accredited Aristotelian doctrine put before one so forcibly as it is put by Mr. Colle, whether one accepts it or not. Only I could wish that the author had known enough of modern work to understand how seriously the theory has been discredited, as I also wish he had studied *e.g.* Prof. Burnet's *Early Greek Philosophy* before making some rather rash assertions about the dates of the philosophers, and that he had gone more to the actual texts, especially in the all-important case of Parmenides, than to misleading doxographical traditions.

A. E. T.

Annales de L'Institut Supérieur de Philosophie (Université de Louvain).
Tome 1. Année 1912. Louvain and Paris. Pp. vii, 705.

Our space will hardly admit of more than a line of welcome to this new annual, which bears eloquent testimony both to the vitality of Thomism as a distinctive type of philosophy, and to the position and wide range of interests of the Philosophical School of Louvain. Of the nine contributions, most of which are of considerable scope, two belong to Experimental Psychology, that of MM. Michotte and Ransy reporting and analysing a series of experiments devised to throw light on "logical memory," (the method adopted being to exhibit pairs of terms, and to call on the subject to name a relation between them, specifying as carefully as possible any intermediaries which contributed to its recognition), and that of M. Michotte on recent researches on the apparent simultaneity of periodically recurrent disparate impressions. M. Jacquart contributes an elaborate study of the statistics of crime in Belgium from 1868 to 1909, M. Lottin, a monograph on Quetelet, and M. Mansion, a learned examination of the Aristotelian concept of Nature. M. Balthazar, in an essay on St. Anselm's famous proof of the existence of God and the treatment of it by St. Thomas, arrives at the conclusion that the Anselmian argument is absolutely vitiated, as has usually been held, by what he calls its "idealism," i.e., its unjustified transition from the presence of the concept of God *in intellectu* to the existence of a corresponding object *extra mentem*—and that certain recent attempts to show that St. Thomas's criticisms are aimed only at current misunderstandings of Anselm's reasoning are unjustified. Perhaps the most suggestive sentence in the essay is the following: "We only tend towards God, we only seek in Him our ultimate end, *because we know* that God is necessary for an adequate explanation of the world of experience." This is, no doubt, the Thomist position, but it would be an interesting question whether it is not also a neat formulation of the central error of an exaggerated "intellectualism". M. Néve, writing on "Pragmatism and the Philosophy of Bergson," answers the question whether Bergson is a "pragmatist" by saying that he is not only a pragmatist, but the only pragmatist who has given to the current "pragmatic" tendencies a coherent expression of which "intellectualism" is bound to take serious account. M. Lemaire's essay on "The Value of Scientific Experiment" deals with the utterances of Duhem, Le Roy, and Poincaré (among others). In the main, the views of Poincaré are sustained. The object of the essay is to protest against the tendency to break down the distinction between "fact" and "theory," by regarding the so-called "scientific fact" as a highly arbitrary "substitute" for the "fact" of actual experience. The author's point is that, in the last resort, the "facts" of experience are "given" not "made," and that the "law" is given in and with the facts which it connects.

A. E. TAYLOR.

La Théorie de l'Homme et de la Civilisation. Par ÉRASME DE MAJEWSKI.
Paris: Librairie H. Le Soudier, 1911. 8vo. Pp. 351. 8 francs.

This is the second part of a projected trilogy, the first part having appeared some three years ago under the title of *La Science de la Civilisation*, and being already in its second edition. The author, who is a Pole, belongs to that large class of sociologists, represented in this country by few thinkers of eminence other than Spencer, who, proceeding on strictly deterministic principles, seek to assign to society its exact place amongst

biological phenomena. He distinguishes, as contrasted with the non-living matter, three forms of life, the cell, the organism, and society. In his peculiar terminology, they represent so many different 'realities,' the organism being named 'reality C' and society 'reality D'. So far as his object is simply to affirm that intersubjective experience, no less than subjective experience, is a fact, and moreover a fact in some sense *sui generis*, he is perhaps not strikingly original. But he has a further truth to announce which, he is convinced, will revolutionise sociological science. This is to the effect that—once more to make use of his novel vocabulary—the "*inter-mens*," which is the essence of 'reality D,' that is, society, is a "*parler-mens*." Speech, he maintains, in and by itself, converts what would otherwise be a mere animal into a specifically social being. Man, *qui* man, is the product of the social thought which forms the psychical side of the civilisation to which he belongs; whilst the corresponding physical side is speech. In developing this doctrine of the relation of thought and speech, and their joint effect in raising the individual consciousness as it were to a higher power, the author does not adduce empirical proofs, psychological or anthropological, after the manner dear to the Anglo-Saxon mind, but relies rather on a dialectical method of producing conviction. It is to be noted that he identifies a civilisation with the group of those who speak the same language, so that Great Britain and the United States or Portugal and Brazil are, we suppose, really one society. Meanwhile, 'humanity' is left rather out in the cold, since the possibilities of Esperanto do not appeal to our author. Why not, however, set up humanity as 'reality E' with some other type of social bond, say, telepathy?

M.

Traité de l'Enchaînement des Idées Fondamentales dans les Sciences et dans l'Histoire. A. COURNOT. Nouvelle édition. Paris: Hachette et C^e, 1911. Pp. xviii, 712.

Like most of the works of Cournot, this important treatise on the concepts and methods of knowledge, when first published in 1861, 'fell still-born from the press'. Its thorough and patient criticism was altogether opposed in spirit to the facile eclecticism of the official philosophical circles of the Third Empire, if indeed one can speak of "philosophy" at all in connexion with what was for the most part no better than the rhetorical elaboration of trivial ideas. French philosophy has, however, now taken a new lease of life, and it is not remarkable that there should be a distinct demand for reprints of Cournot's chief works, which have become exceedingly rare in the original editions. Hence M. Lévy-Bruhl, who furnishes a brief Introduction to the present volume, confidently predicts that our own age, which seems to be specially interested in philosophy as the criticism of science and her methods, will give the neglected philosopher the recognition which was never his lot in life. Detailed discussion of a reprinted work which, of course, starts from the level of the sciences as they were half a century ago, would be out of place here, but I cannot abstain from calling attention to the historical interest of the first "book" of the work, in connexion with the later developments of the philosophy of the Mathematics. We see in Cournot's treatment of the subject the demand for the recognition of "order" as the supreme concept of mathematical thought which has borne such fruit in our own generation, but he has not as yet the instruments needed to develop his central concept fully, an adequate symbolic logic, and an adequate treatment of the problem of the transfinite, and hence is con-

stantly being compelled to stop short of his goal when almost in reach of it. (E.g. he is still troubled by the unfortunate Leibnizian view of the "infinitesimal" as the basis of the Calculus.) Bolzano was perhaps the one man who, more than any other, might have helped him in the right direction, but in all probability he had not so much as heard Bolzano's name.

A. E. T.

Aristoteles Über die Seele, neu übersetzt. Von Dr. ADOLF BUSSE. Leipzig: Felix Meiner, 1911. Pp. xx. 121. Price, M. 2.20.

This is the fourth volume of the very useful *Philosophische Bibliothek*, published formerly by the Durr'sche Buchhandlung. The translation is in the main accurate, but does not throw new light on the text, and in passages of any difficulty is apt to go astray. Thus in book i., chap. i., we have at 402^b6 καθάπερ ζῶον, 'wie es beim lebenden Wesen ist' (where the context shows that 'ist' is wrong), at 23 κατὰ τὴν φαντασίαν 'vermöge unserer Einbildungskraft' (*phantasia* is here quite untechnical), at 403^b9 οὐκ ἔστι τις . . . ἀλλ' ὁ φυσικός 'ist doch kein anderer als der Physiker,' at 12 ὅσα δὲ μὴ ἢ τοιαῦτα 'was aber nicht solcher Art ist' (*ἢ* neglected). Again, to take another famous chapter, in iii. 5 no attempt is made to do justice to the structure of the first sentence; ὥσπερ is simply neglected. The treatment of the particles in general is not very satisfactory. For the most part, however, the sense is very fairly given throughout.

The notes are short and are largely textual. They are in the main sensible, but display somewhat excessive haste to emend where the received text is confirmed by the ancient commentators, and is on a due consideration quite defensible. Dr. Busse is somewhat too ready to follow Torstrik (412^b20, 417^a22, 30, 32, 419^b2, 24), Essen (405^a4, 420^a33, 424^a26), Susemihle (416^a3, 423^a13), or Freudenthal (431^a17-22) in alteration of the text. In 417^a13 Torstrik's αἰσθητόν seems to be right, and in 420^a6 there is much to be said for his reading. In 413^b22 καὶ φαντασίαν, which with Freudenthal Dr. Busse omits, can be defended by a comparison with 434^a1. There is much to be said for the emendations by Belger, Diels, and Steinhardt, adopted at 402^b16, 404^a5, 420^a4, but the credit of the last properly belongs to Pacius. In 431^a29 also κακέῖνα, adopted from Pacius, is quite likely to be right. In 426^a27 Dr. Busse must be right in following Trendelenburg, unless we should read εἰ δὲ συμφωνία <ἢ> φωνή τις ἐστίν, with the same meaning.

Dr. Busse's own emendations cannot be pronounced successful. Those at 402^a19, 404^b22, 405^b28, 406^a12, 408^b17, 410^a23-b2, 412^b28, 413^a30, 416^b23-25, 27, 419^a34, 420^a23, 421^a1, 424^a23, 425^a15, 426^b15-17, 429^b27, 430^b1-5, 25, 431^a29, 434^a32, 437^a7, seem to be unnecessary. At 418^a29, where he proposes τὸ γὰρ <δι' ἄλλο> ὁρατόν ἐστι χρώμα, the text may be fairly well defended as by Mr. Hicks, or we might read τὸ γὰρ ὁρατόν ἐστι χρώμα, which seems to have been expected by Simplicius and has been proposed by Prof. J. A. Smith, or τὸ γὰρ ὁρατόν ἔστω χρώμα, which is perhaps confirmed by Themistius's νῦν δὲ τοσοῦτον κείσθω τὴν πρώτῃν, ὅτι τὸ ὁρατόν ἐστι χρώμα. At 426^a28 the whole phrase καὶ ἔστιν ὡς οὐχ ἓν τὸ αὐτὸ is more likely to be a gloss than, as Dr. Busse thinks, the words ἔστιν ὡς ἓν. He has, however, one emendation which is worth serious consideration: 434^a13-15 ὁρᾷ δ' ἐκείνη ταύτην, ὥσπερ σφαῖρα—φύσει δὲ αἰὲ ἢ ἂν ἀρχικωτέρα—καὶ κινεῖ ἢ ὄρεξι τὴν ἐρεῖζν, ὅταν ἀκρασία γένηται.

W. D. Ross.

Weltbegriff und Erkenntnisbegriff. Von Dr. VIKTOR KRAFT. *Eine erkenntnistheoretische Untersuchung.* Leipzig: Verlag von Johann Ambrosius Barth, 1912. Pp. xii, 232.

The author of this work sets himself a very ambitious task. He endeavours to survey each of the principal theories of the nature of reality from the standpoint both of epistemology and of ontology: to show what they mean and where they fail; and to prove, in conclusion, that the 'grossartig' and 'ungeheuer bedeutsam' theory of realism is alone worthy to hold the field. The author is well equipped for his task in point of erudition. But the course of his main argument is not convincing even to those of us who are ourselves realists.

The two opening parts of the book are introductory. The task of philosophy, we are told, is to exhibit, on a sound basis, the systematic unity of the contents of experience, and this is interpreted in the unduly restricted sense of showing the unity of psychical and physical. The second conducts us through the whole history of philosophy, but the author guides us as if we were a Cook's party. He does not allow us to linger, and no specialist would be satisfied with his account. It is misleading, for instance, to contrast Kant with Berkeley on the ground that the latter and not the former maintained that all ideas were subjective modifications. 'Ideas,' according to Berkeley, are 'objects' of mind, they are 'in mind,' 'not by way of mode but by way of idea'.

The critical part of the work weighs and rejects dualism, idealism and positivism. The rejection of Cartesianism is not new: the Cartesian has no valid way of exit from his private self. There is some doubt, however, as to the precise meaning of 'positivism'. It is not Comte's theory—that we know; and officially it means only that we deny the knowledge of substantial mind or substantial matter, but the author tends to treat it, for polemical purposes, as mere presentationism—the doctrine that nothing exists save a string of psychical facts. It is unfortunate that he has not attempted any serious critique of the category of substance. It must mean more than a relation of content, we are told, but how much more seems left to common sense.

And this is the rock on which both idealism and positivism founder. Both involve solipsism. In saying this the author, on his premises, commits a double fallacy. In the first place idealism and positivism should coincide, since, according to him, the fault of idealism is that it can only interpret substance as a special sort of relation. In the second, neither theory is solipsistic; since the solipsist holds that we have ground for supposing the existence of one substance in the further sense required—though only one. The question is worth discussing, but the author only proves his point—which is the crux of his argument—by tedious reiteration. The only other ground is the obvious but insufficient one that *Bewusstsein überhaupt* must take place within individual consciousness.

The rejection of solipsism is the ground for believing in realism. Realism is the only theory of the world which can justify a belief in other selves. And this realism is straightway interpreted as meaning natural science plus a collection of selves, although one would have supposed that neither an idealistic monism which tried to show that an *infra* personal feeling was bound to involve a *supra* personal Absolute, nor an idealistic pluralism which maintained, on other grounds, that what we call matter must really be spirit, would be affected by the author's argument. And there are two other serious objections. The author maintains that our only immediate acquaintance with reality is mere meaningless sensation, and he has given no grounds for supposing that the arguments by which he refuted dualism do not apply to his own doc-

trine. In the second place, while denying that he intends to adopt the traditional distinction of primary and secondary qualities, he does maintain that we are bound to maintain that some of our sense-data—as they appear—are actual bits of the physical world. But how, in that case, has he answered a previous objection of his own, *viz.*, that the ground for rejecting naïve realism is not that we see less than the actual but that what we see is always distorted? Surely this holds for spatial as for other qualities.

There is a modest section in which a more adequate groundwork for realism is suggested. There we are informed that the object of cognition is never identical with the act of apprehension and never contained in that act. But this suggestion is quite disconnected with the general argument of the book.

J. LAIRD.

Das Weltproblem vom Standpunkte des Relativistischen Positivismus aus Historisch Kritisch Dargestellt, von JOSEPH PETZOLDT. Zweite, Vermehrte Auflage. Leipzig und Berlin, Druck und Verlag von B. G. Teubner, 1912. Pp. xii, 210.

Stimulated by certain ideas of Avenarius, Mach and Schuppe, Herr Petzoldt has drawn the rough outlines of a philosophy which seeks to combine the 'positivist' view, that the function of science is just to describe what is actually observed, with the 'relativist' view, that there are no 'absolute' realities, that all reality is, and is known, only in relation to other realities. The conception of 'substance' offends against both these views, inasmuch as it represents an *unobserved* something which is supposed to support observed qualities, and also implies the existence of an *absolute* something which is supposed to remain unchanged amid all sorts of merely phenomenal changes in its qualities and relations. Accordingly, 'substance' is treated as the original sin of philosophers, and Herr Petzoldt runs through the whole history of philosophy in order to trace the baneful influence of this notion on science and civilisation. Of the historic philosophers only two have won our author's sympathy. They are Protagoras, the father of Relativism, and Hume, the destructive critic of 'substances' and 'powers'. All other philosophers have simply hindered the advance of knowledge by continually rehabilitating the notion of 'absolute substance' in all sorts of new guises (the Platonic Ideas, the Kantian *Ding an Sich*, etc.). It remained for Avenarius, Mach, Schuppe, and Herr Petzoldt to complete the work of Protagoras and Hume. Thanks to them the history of philosophy has at last accomplished its task, namely, to explode the notion of substance, and thereby to remove the greatest obstacle in the path of science. Reality is not composed of absolute Substance or Substances having certain qualities, but just consists of these qualities standing in various relations, and changing with them. What these qualities may be apart from these relations, is a silly question to ask. Still, since there cannot be relations without related terms, Herr Petzoldt does not succeed in completely exorcising the old Adam. Under the *alias* of 'Qualities,' the banished 'substances' are merely grinning at him.

A. WOLF.

Josef Dietzgen's Sämmtliche Schriften. Edited by EUGEN DIETZGEN.
Wiesbaden: Verlag der Dietzgenschen Philosophie, 1911. 3 vols.
Pp. 226, 356, 292.

These volumes contain a long essay on "Kopfarbeit"; shorter essays on the religion of social democracy, the philosophy of the same, and on the nature and limits of knowledge; a number of letters or brief disquisitions on logic, especially 'the logic of democracy and the proletariat'; a treatise of some seventy pages on the theory of knowledge from a socialistic point of view; a more extensive treatise of about 100 pages on philosophy; and some private letters, open letters and fugitive pieces. The teaching of the volumes is identical with, or related to, that contained in two books from the same source previously reviewed in this Journal. The first of these new volumes is prefaced with a sketch of Josef Dietzgen's life by his son.

S. J. CHAPMAN.

Il Diritto Come Norma Tecnica. ADOLFO RAVÀ. Cagliari, 1911.
Pp. ix, 125.

The author's thesis may be stated briefly thus. The widely-spread notion that Jurisprudence and its laws are a part of moral science is manifestly erroneous. For actions are only of moral worth when, as Kant taught, they are done from a sense of their intrinsic goodness, and express the "good will". Hence, if there are such things as moral laws or norms, they must be, as Kant held, purely formal. But positive law cannot command obedience to a purely formal imperative. Its commands are always relative to an end, *viz.* the maintenance of civilised human society, and the actions commanded are not commanded as intrinsically good, but as means to this end. In Kantian language, the norms of Jurisprudence are at best hypothetical Imperatives. Consequently they should properly be classed with what Kant calls "rules of skill," not with "laws of duty". This seems, at first sight, to lead to the paradox that morality and law are entirely disconnected. On further consideration, however, we are led to see that the particular end from which the Imperatives of Jurisprudence derive their force, *viz.* the maintenance of society is one which we not merely do will, but which we are ethically bound to will, since the individual himself cannot exist and exhibit morality except as a member of society. Hence, though the commands of Law are logically mere "rules of skill," the nature of the game of which they are the rules requires that they shall be adjusted to the moral duty of maintaining a society in which the attainment of the "good will" is possible. We now take a further step. Strictly speaking, though there is a moral ideal, there are no moral "laws". For, as the fate of Kant's own ethical doctrine has made clear to every one, no specific dutiful act can really be enjoined by a law which is purely formal and independent of any consideration of ends; on this point Utilitarianism has always been the doctrine of sound sense. In the end then, all laws are technical, "rules of skill," and thus the question whether the norms of Jurisprudence are ethical or technical (*i.e.*, whether, in Kant's phraseology, they are categorical or hypothetical) turns out to be senseless. But it was worth while to discuss it for the sake of the light the discussion has thrown on the true nature of morality.

The author's position thus is virtually a reassertion of the Hegelian criticism of the Kantian ethics, for which he expresses high admiration.

In his own words, he substitutes for a morality of legalism one of "the impulses, of the ideal, and of love". One cannot help sympathising with this distrust of mere legalism, but yet, surely there is an ultimate doubt. "The impulses," are not always towards good, "ideals" may be far from admirable, and, as the ancients knew, Eros can pull down as well as build up. In Mr. Ravà's essay, as in all writing on Ethics which leaves the last word to the individual intuition, I cannot help missing some recognition of the worth of authority, or, I may say, "ethical tradition," as bearing witness not only to the means which history has shown to be effective in attaining the good, but as to the nature of the good itself. If I have to discover the good by looking within my own heart, I should surely also look by the light of the judgments of "men of good will" who have gone before.

A. E. TAYLOR.

Received also:—

- G. W. F. Hegel, *The Phenomenology of Mind*, translated, with an introduction and notes, by J. B. Baillie, London, Swan Sonnenschein & Co., Ltd.; New York, The Macmillan Co., 1910, pp. xlv, 427 + viii + 397.
- H. S. Macran, *Hegel's Doctrine of Formal Logic*, Being a Translation of the First Section of the *Subjective Logic*, Oxford, at the Clarendon Press, 1912, pp. 315.
- Émile Boutroux, *The Beyond That is Within, and Other Addresses*, translated by Jonathan Nield, London, Duckworth & Co., 3 Henrietta Street, Covent Garden, W.C., 1912, pp. xv, 138.
- Émile Boutroux, *Historical Studies in Philosophy*, Authorised Translation by Fred Rothwell, B.A., Macmillan & Co., Ltd., London, 1912, pp. ix, 336.
- Charles A. Dubray, *Introductory Philosophy: A Text-Book for Colleges and High Schools*, Longmans, Green & Co., London, New York, Bombay and Calcutta, 1912, pp. xxi, 624.
- Wilhelm Wundt, *An Introduction to Psychology*, translated from the Second German Edition by Rudolf Pintner, London, George Allen & Co., Ltd., 44 and 45 Rathbone Place, 1912, pp. xi, 198.
- Dr. Paul Dubois, *The Education of Self (L'Education de Soi-Même)*, Authorised Translation by Edward G. Richards, M.B., C.M., Funk & Wagnalls Company, New York and London, 1911, pp. 349.
- Duncan Taylor, *The Composition of Matter, and the Evolution of Mind. Immortality a Scientific Certainty*, London and Felling-on-Tyne, The Walter Scott Publishing Co., Ltd., New York, 3 East 14th Street, and Melbourne, 1912, pp. vi, 176.
- Hugh Pope, O.P., S.T.M., *The Scholastic View of Biblical Inspiration*, Reprinted with permission from the Irish Theological Quarterly, for July, 1911, Rome, Printing Office of Riccardo Garroni, Piazza Mignanelli, 23, 1912, pp. 52.
- Ambika Charan Mitra, *The Principles of Logic, Deductive and Inductive*, Calcutta, S. R. Lahiri & Co., 56 College Street, 1912, pp. viii, 341.
- S. Radhakrishnan, *Essentials of Psychology*, Henry Frowde, Oxford University Press, London, New York, Toronto, and Melbourne, 1912, pp. 75.

- James Owen Dorsey and John R. Swanton, *A Dictionary of the Biloxi and Ofo Languages, accompanied with Thirty-One Biloxi Texts and Numerous Biloxi Phrases* (Smithsonian Bulletin), Washington, Government Printing Office, 1912, pp. v, 340.
- Gaston Sortais, *Histoire de la Philosophie Ancienne, Antiquité Classique—Époque Patristique Philosophie Médiévale—Renaissance*, Paris, P. Lethielleux, Libraire-Éditeur, 10 Rue Cassette, 1912, pp. xviii, 627.
- Eugène Dupréel, *Le Rapport Social, Essai sur L'Objet et la Méthode de la Sociologie*, Paris, Libraire Félix Alcan, 108, Boulevard Saint-Germain, 1912, pp. iv, 304.
- Paul Archambault, *Stuart Mill: Choix de Textes et Etude du Système philosophique, Les Grands Philosophes, Français et Étrangers*, 11 Portraits et Gravures, Société des Éditions, Louis-Michaud, 168, Boulevard St.-Germain, Paris, pp. 222.
- J. B. Séverac, *Condorcet: Choix de Textes et Introduction, Les Grands Philosophes, Français et Étrangers*, 9 Gravures et Portraits, Société des Éditions, Louis-Michaud, 168, Boulevard St.-Germain, Paris, pp. 223.
- H. Kazem Zadeh, *Relation d'un Pèlerinage à la Mecque en 1910-1911*, Paris, Ernest Leroux, Editeur, 28 Rue Bonaparte (IV^e), 1912, pp. 84.
- Adolf Phalén, *Das Erkenntnisproblem in Hegels Philosophie, Die Erkenntniskritik als Metaphysik*, Upsala, 1912, Akademische Buchdruckerei, Edv. Berling, pp. vii, 458.
- Hans Driesch, *Ordnungslehre, Ein System des Nicht—Metaphysischen Teiles der Philosophie*, mit besonderer Berücksichtigung der Lehre vom Werden, Verlegt Bei Eugen Diederichs in Jena, 1912, pp. 355.
- Otto Apelt, *Platonische Aufsätze*, Verlag von B. G. Teubner in Leipzig und Berlin, 1912, pp. v, 296.
- Julius Baumann, *Neues zu Sokrates, Aristoteles Euripides*, Leipzig, Verlag von Veit & Comp., 1912, pp. 127.
- Rudolf Eucken, *Der Wahrheitsgehalt Der Religion*, Dritte Umgearbeitete Auflage, Leipzig, Verlag von Veit & Comp., 1912, pp. xiv, 422.
- D. Friedrich Aug. Berth. Nitzsch, *Lehrbuch der Evangelischen Dogmatik*, Dritte Auflage Bearbeitet von Professor Lie. Horst Stephan, Privatdozent in Marburg, Zweiter Teil (Schluss des Werkes), Tübingen, Verlag von J. C. B. Mohr (Paul Siebeck), 1912, pp. 462.
- Dr. Richard Avenarius, *Der Menschliche Weltbegriff*, Dritte Auflage, Vermehrt um den Abdruck von Wilhelm Schuppe, Offener Brief an Avenarius über die "Bestätigung des Naïven Realismus" und von Richard Avenarius, Bemerkungen zum Begriff des Gegenstandes der Psychologie, Leipzig, O. R. Reisland, 1912, pp. xxvi, 274.
- Joh. Gottl. Fichte, *Werke, Auswahl in Sechs Bänden*, Sechster Band, *System der Sittenlehre (1812), Transzendente Logik, Staatslehre oder über das Verhältnis des Urstaates zum Vernunftreiche*, Verlag von Felix Meiner in Leipzig, 1912, pp. 680.
- Hermann Lotze, *Logik, Drei Bücher vom Denken, vom Untersuchen und vom Erkennen, mit der Übersetzung des Aufsatzes: Philosophy in the Last Forty Years, einem Namen- und Sachregister*, Herausgegeben und eingeleitet von Georg Misch, Leipzig, Verlag von Felix Meiner, 1912, pp. cxxviii, 632.
- Oswald Külpe, *Immanuel Kant Darstellung und Würdigung*, Dritte, verbesserte Auflage mit einem Bildnisse Kants, Druck und Verlag von B. G. Teubner in Leipzig, 1912, pp. vi, 153.

- Dr. A. Nathansohn, *Allgemeine Botanik*, mit 4 farbigen und 5 schwarzen, Tafeln und 394 Abbildungen im Text, 1912, Verlag von Quelle & Meyer, in Leipzig, pp. viii, 471.
- E. Troilo, *Il Positivismo e I Diritti Dello Spirito*, Torino, Fratelli Bocca Editori, Milano, Roma, 1912, pp. xv, 360.
- Lorenzo Michelangelo Billia, *L'Esiglio Di Sant' Agostino, Note Sulle contraddizioni di un Sistema di filosofia per decreto*, Seconda Edizione, Accresciuta E. Rifatta, Torino, Libreria Internazionale, Editrici Carlo Clausen, F^{lli} Fiandisio & Co., Successori, 1912, pp. xv, 295.

VIII.—PHILOSOPHICAL PERIODICALS.

PHILOSOPHICAL REVIEW. Vol. xxi., No. 1. **O. Kuelpe.** 'Contribution to the History of the Concept of Reality.' [The concept of reality embraces all those objects whose determination, whether by the special sciences or by their supplementary metaphysics, is regarded as independent of the cognising subject. Specific grounds are required for the postulation, and specific grounds are employed for the determination of the real: "in all sciences of fact, psychology and the humanistic disciplines included, reality is postulated and determined. The investigation of this process, its forms, grounds and results, constitutes for the philosopher of immanence a significant task." Historically, the process may be followed in connexion exclusively with the history of philosophy. The author gives a brief sketch of the concept of reality from the pre-Socratics to the present time.] **A. O. Lovejoy.** 'The Problem of Time in Recent French Philosophy. I. Renouvier and Recent Temporalism.' [Temporalism is the metaphysical theory which maintains the reality and irreducibility of time, the transitive and self-augmentative nature of empirical reality, and the pertinency and primacy of the time-concept in philosophical problems. The present study is to consider its development, and to appraise the argument from temporalism to anti-intellectualism, i.e., to doctrines which explicitly or implicitly assert that reality may be in conflict with the 'laws of thought'. The authors to be examined are Renouvier, Bergson, Pilon and James,—the work of the latter constituting a chapter in French philosophy. The present paper deals with the initiator of temporalism, Renouvier: with his general phenomenism, his finitism, his attitude to evolutionary cosmology and biology, and especially with those omissions in his treatment of the category of time which left unsolved problems to his successors and out of which anti-intellectualistic tendencies have been generated.] **A. K. Rogers.** 'Nietzsche and Democracy.' [The fundamental fact for Nietzsche is the will to power. He appeals first to nature; and if it is objected that development consists in submitting the character of the natural man to a social morality, he replies secondly that our civilisation has brought with it physiological and therefore moral degeneration. We might rejoin that Nietzsche's ideal life simply cannot be lived: but that is unsatisfactory: a better answer is that brute force has been well exchanged for influence, and that influence is rooted in sympathy; that the height of our excellence consists not in enslaving others, but democratically in stimulating them, that their competition may evoke our own energies. And when Nietzsche asserts, thirdly, that his æsthetic ideal of the superman is based on the teaching of science, we may safely say that the very notion of such an ideal implies the substitution of artificial for natural selection.] **W. H. Sheldon.** 'The Consistency of Idealism with Realism.' [Idealism rests on the axiom of system or dependence; everything must be grounded. Realism rests on the axiom of independence; the here-and-now has its own finality. If we keep both axioms, we must, in the realm of objects,

free the 'completed infinite' from contradiction without sacrifice of completeness; and, in that of abstract thought, show that even for the law of contradiction sameness-in-difference is quite consistent. This task the writer essays, by statement, objection, and reply. Realists, he concludes, rightly assert the reality of abstracted unreduced facts, but wrongly deny that they may also be reduced to terms of mind; idealists rightly assert the finality of that reduction, but wrongly deny the equal finality of the abstract; so the contradiction is removed.] Discussions. **J. Dewey.** 'A Reply to Professor Royce's Critique of Instrumentalism.' [Running criticism of Royce's essay. As method for philosophy, instrumentalism indicates a more severe intellectual conscience; in substance, it means recognition of the intelligence as the way in which future possible consequences become effective in the present, and a recognition of the falsity of the current notion of the egotistic isolation of conscious life. In other words, it connects intelligence with a genuine future, and stresses the social constitution of even private experience, and especially of any experience that has assumed the form of knowledge.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

PSYCHOLOGICAL REVIEW. Vol. xix., No. 1. **H. C. Stevens** and **C. J. Ducasse.** 'The Retina and Righthandedness.' [Description of an apparatus which admits of the comparison of lines or distances in any meridian of the field of vision, upon either side of the fixation-point, separated or opposed, and which may be adjusted either by observer or by experimenter. In general, the right half of an extent in the field of vision is overestimated, by both eyes. Now the left halves of the retina are connected with the left hemisphere; if, then, attention is caught by objects projected on these halves, it is the right hand which will make grasping movements; and right-handedness follows, as a direct result of practice.] **K. Dunlap.** 'Difference-sensibility for Rate of Discrete Impressions.' [Report of experiments with sound (modified telegraph sounder; one or two intensities), light (helium tube), sound and light together, and electrical stimuli. Under the conditions, sensibility for rate-differences is more acute than that for time-differences; rate-judgment, therefore, is not essentially a judgment of interval between stimuli. Subjective rhythmical grouping of the impressions gave in every case a more acute difference-sensibility; the perception of rhythm, therefore, is not essentially a mode of the perception of time. The difference limens for a standard of 232° are below 2 per cent., for 435.5° below 3 per cent. Vision is less favourable for discrimination than audition. The results of the bimodal series (vision appears slower) and of the bi-intensity series (weak sounds appear slower) may perhaps be harmonised on the basis of strain-sensations.] **H. A. Carr.** 'Some Novel Experiences.' (1) Positive after-images of motion: the persistent image of an eye, in the dark room, was observed to wink and slightly to rotate, as the actual eye had done in preceding prolonged observation. (2) An illusion of double awakening: the subject-dreams, with the usual implicit acceptance of the reality of the dream-experiences; then she appears to wake, the awakening being always accompanied by a noticeable increase in the apparent illumination of the visual world; then follows actual arousal, with the realisation that the former awakening was illusory. (3) Recall through similarity: an absent-minded subject, who had forgotten her companion of the day before, is reminded of him by the sight of a packet like that which he had carried.] **H. L. Hollingworth.** 'The Influence of Caffein on the Speed and Quality of Performance in Typewriting.' [Speed is quickened by doses of 1-3 grains, retarded by doses of 4-6 grains of caffein alkaloid. Quality, as

measured by number of corrected and uncorrected errors, is superior for the whole range of doses (1.6 grains); both types of errors are affected in about the same degree. Increase of speed is not gained at the expense of additional errors.] **F. Kuhlmann.** 'A New Memory Apparatus.' [The exposing apparatus furnishes an easy means of making up a large amount of memory material; brings the terms of a series suddenly into view and removes them as suddenly; and makes exposure noiselessly. The apparatus for the control of the exposure-interval makes possible the separate study of the processes of perception and of immediate recall. A third apparatus enables the experimenter to vary, independently, magnitude of retinal image and distance for which the eyes are accommodated.]

AMERICAN JOURNAL OF PSYCHOLOGY. Vol. xxiii., No. 1. **B. E. Roethlis** and **J. W. Baird.** 'The Relative Legibility of Different Faces of Printing Types.' [The legibility of a letter depends on form, size, heaviness of face, width of margin, position in letter-group, nature of adjacent letters. Certain faces, and certain letters of the faces, are far more legible than others, the difference being more pronounced with isolated than with grouped letters; there is great need for modification of certain letters of the alphabet. The first letter of a group has the advantage as regards legibility; then the last; the middle letters fare worst; the size and form of adjacent letters play an important part. Quality and texture of paper are of secondary moment; heavy-faced types are, within limits, preferable to light-faced.] **E. B. Titchener.** 'The Psychology of the New *Britannica*.' [A detailed and, on the whole, unfavourable review of the organisation and contents of the psychological articles in the eleventh edition.] **E. C. Sanford.** 'The Function of the Several Senses in the Mental Life.' [A preliminary sketch of the functional values and interrelations of the senses leads, through illustrations of the parts they play in hallucination, illusion, dreams, art, and of the consequences of their separate loss, to the main point of the article: that the developed mental life is a matter, not of direct sense-experience, but of sensory and linguistic symbols. Touch gives us the world of space, material reality, external force; active touch, energy, active efficiency, freedom; vision, another world of space and things; hearing, the symbolic machinery of thought; the organic senses, our intuitions of ourselves and the basis of our emotions. Farthest removed from their sensory origin are the symbols of transcendental geometry and of theory of numbers.] **F. L. Wells.** 'The Relation of Practice to Individual Differences.' [Report of result of two tests, continuous addition and cancellation of zeros, carried on for thirty days with a group of five men and five women. The tests show a difference in the individual's (or function's) fundamental plasticity, or ability to profit by practice; a difference in the amount of practice actually experienced; and constitutional (neural) factors, other than plasticity, which determine efficiency at the beginning of special practice: the influences are in the order given. Plasticity and efficiency in the tests, and episodic changes in the organism which affect efficiency, are all specific; no notable sex-difference appeared. Superiority at the beginning of special practice is not necessarily or even probably connected with poor prospect of future improvement.] **H. L. Hollingworth.** 'The Influence of Caffein Alkaloid on the Quality and Amount of Sleep.' [Small doses (1.4 grains), pure or in syrup, do not disturb sleep; larger doses (6 grains) induce marked impairment of sleep; both rules have a few exceptions. The effect is enhanced when the drug is taken on an empty stomach, or without solid food, or on successive days; it does not depend on age, sex, or previous caffein habits; it varies

inversely with increase in bodily weight. These results hold both for quality and for length of sleep.] Minor Studies from the Psychological Laboratory of Vassar College. **M. V. Atherton** and **M. F. Washburn**. 'xviii. Mediate Associations Studied by the Method of Inhibiting Associations; an Instance of the Effect of *Aufgabe*.' [The observer is instructed, on hearing a stimulus word, to respond by a word that has no associative connexion with it. The results show sound associations; various modes and mechanisms of perseveration; the occurrence of associated ideas whose relation to the stimulus is at the time overlooked; and 'mediate' associations, i.e., ideas connected with the stimulus word by an intermediate process that has no conscious accompaniment. There were seventy-seven (11.6 per cent.) mediate associations out of a total of 662.] **M. W. Chapin** and **M. F. Washburn**. 'xix. A Study of the Images Representing the Concept "Meaning".' [The images described by 193 college students are all either visual (50 per cent.), kinæsthetic (36.7 per cent.), or visual-kinæsthetic (13.3 per cent.). All but one of the kinæsthetic, and all but seventeen of the visual images, were relevant, i.e., interpretable in the light of some part-meaning of 'meaning'. The movements imaged are those of effort to find and of the process of search. The visual images are most commonly connected with the ideas of disentangling; digging out, revealing an inner aspect; grasping; equivalence; and illumination.] **J. S. van Teslaar**. 'Recent Literature on Psychoanalysis.' [Review of ten psychoanalytical studies, including Freud's *Bemerkungen über einen autobiographisch beschriebenen Fall von Paranoia und Zwei Prinzipien des psychischen Geschehens*.] Editors. 'Alfred Binet.' Book Reviews. Book Notes.

CAMBRIDGE MAGAZINE. Saturday, 11th May, 1912. In the number of the Cambridge Magazine published on 11th May, Mr. G. H. Hardy begins a series of articles on the 'New New Realism,' by which he means the latest views of Messrs Moore and Russell. Mr. Hardy describes the Old New Realism of which he was an adherent, and speaks regretfully of the objectively false propositions which have been displaced by Mr. Russell's theory of judgment. I sympathise with Mr. Hardy on the point, and I do not feel confident that Mr. Russell's present theory will necessitate a permanent parting from our old friends. It is a little surprising that Mr. Hardy should not remark how far the 'New New Realism' is from its old position with regard to objects of perception; here it seems to me to have improved but to have ceased to be particularly realistic, except in rightly retaining the constantly forgotten distinction which it was Mr. Moore's merit to point out in his 'Refutation of Idealism'. We look forward to the continuation of this series of articles.

JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS.—ix., 9. **R. W. Sellars**. 'Is there a Cognitive Relation?' [No; what we have in cognition is an *attitude* towards objects considered real.] **K. Schmidt**. 'Inversion.' [Is valid *sometimes*, when the conditions 'not-B exists' or 'B exists' is satisfied in the particular universe of discourse.] New York Branch of the American Psychological Association. ix., 10. **H. M. Kallen**. 'Beauty, Cognition, Goodness.' [Beauty is neither in the mind nor in the object, but is "the optional mode of that positive intrinsic value-relation which binds the mind to its object".] **M. E. Haggerty**. 'Imitation and Animal Behaviour.' [The distinction of instinctive and voluntary imitation is too vague to be useful, but there is behaviour to be described as imitation which should be studied further experimentally.] ix., 11. **W. H. Sheldon**. 'Chance.' [Suggests that

chance is not a name for our ignorance, but an "objective category," in the sense of events which have no cause, since "there not only is a certain aspect of fact which is outside of causality," but "a perfectly definable intelligible tendency in physical events toward variation from law . . . nearly . . . as widely verified as laws themselves".] **J. E. W. Wallin.** 'Experimental Oral Orthogenies: an Experimental Investigation of the Effects of Dental Treatment in Mental Efficiency.' [The average gain in all the tests is 57 per cent., so that free dentistry for school children would pay the community even commercially.] **E. P. Poulton.** [A letter about a mistake of Prof. Punnett concerning some mimicking Danaines.] **E. B. McGilvary.** 'Prof. Dewey's "Awareness".' [Asks whether inhibitions are classed by Dewey among 'organic releases'.] ix., 12. **W. T. Marvin.** 'Dogmatism v. Criticism.' [Neo-realism should be called neo-dogmatism—in a laudatory sense.] **K. Schmidt.** 'Studies in the Structure of Systems. 2. The Deductive System Form.' [The Aristotelian form of proof accounts neither for the vicariousness of axioms nor for the occurrence of the new.] **B. Muscio.** 'Miss Calkins' Reply to the Realist.' [Cf. viii., 17.] ix., 13. **A. C. Armstrong.** 'The Progress of Evolution.' [A discussion of the concepts and principles implied by evolution is needed.] **P. Bovet.** 'The Feeling of Oughtness: its Psychological Conditions.' [Obligation arises from orders given by some one loved and admired.] **E. B. Gilvary.** 'Prof. Dewey's Brief Studies in Realism.' [Are "void as against realists who . . . deny the existence of a 'mind' to which objects are presented".] **H. W. Wright.** Twelfth Meeting of the Western Philosophical Association. ix., 14. **M. Meyer.** 'The Present Status of the Problem of the Relative between Mind and Body.' [*Alias* 'the Ghost Theory of Animal Behaviour'—an attack on McDougall's book, which keeps to generalities.] **A. K. Rogers.** 'Some Aspects of Professor Fite's Individualism.' [Largely sympathises.] **H. L. Hollingworth.** 'New York Branch of the American Psychological Association.' [Abstracts of several papers of pedagogical interest.] ix., 15. **T. de Laguna.** 'Opposition and the Syllogism.' [An attempt "to show that the syllogistic relation is very closely allied to that opposition".] **G. H. Mead.** 'The Mechanism of Social Consciousness.' [The 'me' is a man's reply to his own talk. . . . It is an importation from the field of social objects into an amorphous, unorganised field of what we call inner experience."] **J. H. Leuba.** 'Religion and the Discovery of Truth.' [*Appropos* of Stratton's *Psychology of the Religious Life*. Argues that religious beliefs do not obtain pragmatic verification.] ix., 16. **H. B. Alexander.** 'The Conception of Soul.' [Infers, from an anthropological survey, that 'soul' properly means personality.] **K. Schmidt.** 'Studies in the Structure of Systems. Three Postulates.' [Contrasts the typically modern conception of scientific principles as postulates, between which there is a choice, and believed in "because true consequences follow from them," with the older Aristotelian notion that they are self-evident 'axioms'. But the modern view is wrongly applied to Plato, who demanded that the scientific 'hypotheses' should be validated by deduction from an 'unhypothetical' principle, the Idea of Good. His theory is, therefore, the same as Aristotle's, who improved on it by observing that deduction from a single principle was impossible.]

BRITISH JOURNAL OF PSYCHOLOGY. Vol. iv., Pt. 2. **H. J. Watt.** 'The Elements of Experience and their Integration, or Modalism.' [An attempt to secure the independence of psychology by showing that experience is capable of more exact systematisation than is generally accepted. Method: detailed comparative consideration of introspective aspects of

elements, such as sensation, and of states like motion, distance, feeling and recognition. Thus criteria of attributes of elements, and derivativeness of other experiences, are obtained. Comparative independence of sensations makes them the best starting-point for study of elements of experience and their integration. Questions as to qualitative differences between sensations must ultimately be decided by an examination of the psychological characteristics of the sensations in question, not merely by fact that those sensations are due to the stimulation of the same (or of different) sense organs: touch sensation, *e.g.* may arise through medium of two different systems of end-organs. Typical characteristics of sensation discussed; of these the attribute of Order (not temporal) is the most important for the higher developments of experience—not merely for localisation. In case of sound sensations, pitch is taken as an attribute determining order, all tones sharing same "sound quality". So for sound we get all the attributes—quality as such, or mere sound, order or pitch-place, and extensity or voluminosity. Peculiarity of tone lies in the fact that two of the attributes, pitch and voluminosity, are "mutually dependent variables". The combination of sensory elements must be explained by intrinsic affinities, not merely ascribed to physiological conditions. Motion and distance are discussed fully. Motion obtained when successive sensations of same sense, differing within certain limits in attribute of order, fuse with one another; articular movement sensations ascribed to differences in order of sensations of position. In case of all sensations, rate of change of order must be above a certain minimum, if motion is to be experienced; within the time limits of motion, motion varies in speed. Motion is the integration of the differences in respect of order of the given sensations: yet it cannot be analysed into series of sensations of position: nor is it an "unconscious inference" from the sensations, nor are these sensations themselves lost in the integration, so this view is neither sensationalism nor "mental chemistry". Influence of motion on attention explained as strictly analogous to that of any isolated sensation among a group of dissimilar ones. Complete analogy shown between visual motion and melody. Distance (a similar modification of experience due to integration merely from attribute of order) shows similar characteristics. Author proceeds to show how his method may be used to reveal supposed mental elements as "modifications from integrations as yet undiscovered". Similarity between Feeling and Motion shown in detail; as latter may be explained as integration of sensations so may former as integration of some attribute of experience, though integrative basis of feeling not yet discovered. So with Recognition—a secondary modification of order: resembles motion and feeling in many characteristics: *e.g.* all three (1) are independent of any one particular sense-organ; (2) are not reproducible in isolation; (3) do not associate with one another; (4) cannot be studied introspectively apart from experiences to which they are attached, etc. Author suggests his method might be applied to all forms of experience not shown to be elementary, as tested primarily by standard of sensational type.] **W. Mulder.** 'The Fusion of Sensations of Rotation.' From the Physiological Laboratory, Utrecht. [Object: to find out what happens when a person is subjected to a periodically interrupted rotation, the periods of rotation and interruption being always of equal length. Subjects seated on revolving table at an angle which limited stimulation to horizontal semi-circular canals. Table alternately rotated and stopped. Results depend on length of periods of rotation and interruption: 0.9" gives experiences of rotation and rest; 0.7" gives oscillation. When periods reduced to 0.44" subject thinks he is at rest all the time, the after-sensation of reversed movement fusing with sensation to give rest;

more strictly, effect of stimulus is annulled before it gives rise to sensation. Length of periods of rotation and interruption at which illusion of rest occurs, varies with speed of rotation, being shorter for higher speed up to 12° per sec. **Francis Aveling.** 'The Relation of Thought-Process and Percept in Perception.' [Problem: to discover whether there are any forms of sensorial structure of percepts correlative to differences in thought-processes involved in perception. Pictures and objects exposed for fraction of a second. Sometimes instruction given that object should be perceived as an individual, sometimes as type: control experiments without instruction. Seventy-five per cent. of type instructions gave type perceptions: same with individual instructions. "Sensorial content" of type perception twenty per cent. inferior in detail, accuracy, etc., to that of individual percept. Inferiority remained even where type percept occurred after individual instruction ("inversion"). Assimilation of object to definite memory image caused inversion from type to individual percept: so does complexity or schematic nature of picture: presence of striking details favourable to individual perception. In control experiments number of type and individual perceptions almost equal.] **Charles S. Myers.** 'A Case of Synæsthesia.' [Subject associated colours with musical notes: regular variation of colour tone with rise of pitch. Two simultaneous notes rarely give a mixture of colours, more often a suggestion of two colours. Voices also "coloured". Colours vary with timbre and also with loudness of sounds, and depend partly on colour of preceding pitch, a kind of contrast of effect being obtained. Colours not visualised but only names thought of. Associations unaffected by perception of an actual colour when note is sounded. 'Higher' colours may be ascribed to higher sounds without awareness of the change of pitch: and two colours may be thought of even when presence of the two tones is not detected. Origin of synæsthesia referred to primitive stage in differentiation of sensations. Subject also associated numbers with letters. Various cases of synæsthesia shown to have general but not detailed resemblance. Vol. iv. Pts. 3 and 4. **S. Alexander.** 'Foundations and Sketch-plan of a Conational Psychology. [Excludes all presentations from the scope of psychology, which is the science of the act of experiencing. Objects as perceived or imagined are non-mental ("contemplated objects") and form the subject matter of the physical sciences. The term "enjoyments" is applied to purely mental experiences. Thus both Ward's tripartite and Stout's (later) bipartite division of the mind are rejected, and mental life is confined to conation, with feeling as a qualification of conation. Conation may be (1) "practical," when we seek to alter some object, or its relation to ourselves or to other objects, or (2) "theoretical," as in attention, though there is no sharp division between the two forms. Both forms may be either receptive or active; and each form is both sensory and motor. "Practical" activity not synonymous with attention to movements of the body: for sensations of movement also belong to the world of "objects contemplated," not to "enjoyments". This fundamental change in the analysis of consciousness only involves rearrangement of much of modern psychology, not its abandonment. Distinctions between sensory conations may require reference to objects sensed; but probably there are differences of a spatial nature and of direction which are actually "enjoyed". Perception is instinctive or impulsive conation, the mental act by which the ideal elements involved in a percept are revealed, these elements themselves, however, being objective and non-mental. When this tied or qualifying conative tendency (involved in perception) becomes independent we get reproductive conation, the object now being an image. The practical form of this form of conation is "appetition". Desire is the practical form

of the conation involved in expecting and remembering; aversion corresponds to the theoretical form found in forgetting. Voluntary conation and thinking are again the same kind of conation, the object being a proposition. We do not will a state of the self or even a movement, but some "matter of fact". Author points out that difficult subject of feeling remains to be discussed.] **A. R. Abelson.** "The Measurement of Mental Ability of 'Backward' Children." [Subjects were the least abnormal children between ages of eight and sixteen, in schools for mentally defectives. Tests used, tapping, crossing out rings, memory for commissions, other memory tests, interpretation of pictures, tests with intermingled geometrical figures, etc.; teachers astonished at general ability of children to perform most tests, but arranging cartridges in order of weight quite beyond most of the children. Inter-correlation co-efficients remarkably alike, especially with girls. Theory of a "common factor" corroborated, intellectual rather than conative; deficiency possibly consists generally in lack of "clear awareness". No simple test gives reliable guide as to intelligence, but all the tests pooled give co-efficient of 0.9 with the girls and 0.87 with boys, and give much better clue as to true intelligence than do 'teacher' estimates of "practical intelligence". Correlations tend to increase with repetition of tests, *i.e.* more intelligent children improve more with practice than do the others. Reading and arithmetic discredited as adequate tests of general intelligence. Practical intelligence seems to increase during ages eight to sixteen. Author also concludes (1) that prevalent methods of examining mental deficiency are inadequate; (2) that apparent intellectuality of a performance may be very misleading, *e.g.* tapping test proved to be as valuable a test as interpretation of pictures; (3) that with backward children it is better to use some tests for all ages and allow for age rather than use different Tests for different ages (*cf.* Binet's).] **W. H. Winch.** "Mental Fatigue in Day-school Children as measured by Arithmetical Reasoning." [Experiments in elementary school with fifty-four Standard IV. boys, average ten and a half years: divided into equal groups on basis of arithmetic problem tests; then group A practised in arithmetical problems in the early morning school hours, group B in same problems in late afternoon; only method of solving problems had to be given, not actual calculations. Group A showed improvement of 18.3%, group B of 11.3%. With a fair proportion of group B the afternoon practice was apparently useless. Similar experiments with girls, average age eleven and a quarter years: those practised in morning improved 14.6%, afternoon group only 7.9%. Similar experiments with infants, average age six and a half years. Morning practice produced improvement of 12%, for group as a whole; group practised at 3.30 p.m. showed no improvement. With Standard VII. boys (average age twelve and three-quarters) morning group improved 7.2%, afternoon group 4.4%, so time of day did not make much difference to boys of this age, and greatest effect of afternoon fatigue is shown by the infants.] **Carveth Read.** "The Function of Relations in Thought." [Discussion of views of Ribot, Bain, Thomas Brown, Stout, Lloyd Morgan and Spencer. The functioning of relations in reproduction: the work of selective interest and especially of 'dissociation by varying concomitants' in producing originality; relations as abstract ideas, produced by dissociation. Mutual inhibition of ideas may lead to "voluntary condensation"; the metaphor an example of involuntary condensation—a subconscious process. Relations favourable to new combinations, because highly abstract: genius especially sensitive to analogy. Literary illustrations and experimental evidence; subjects asked to complete analogies or comparisons. The relations that are most simply and directly reproductive of ideas similarly related are

those of size. Reaction emphatically not simple association: relational systems may profoundly determine our thoughts without our being conscious of those systems. The genius is able to use past experience, even if not specially attended to, for his purpose in hand; he has more "effective" knowledge than the ordinary man. Illustrations from hypnotic phenomena of work of subconscious impressions. "The re-vivifying of dormant records by present analogies" is more active in the genius.] **W. G. Sleight.** 'Memory and Formal Training.' [Criticism of experimental work of Neumann, Winch, and Fracker, supporting theory of transference of memory practice. None of these held conclusive owing to defects of method, etc. Author's own experiments dealt with students and with children from three schools. In each school children given memory tests (spot pattern, nonsense syllables, dates, poetry and prose) and divided into four groups of equal capacity. One group then practised with memorising of poetry (Group II), another with tables (Group III), Group IV. with prose selections, Group I. not practised at all. Then memory tests similar to first given and improvements noted. Those practised in prose (Group IV.) soon came to "saturation point" and other groups eventually did as well as Group IV. in prose tests. Groups II. and III. show marked improvement in (rhythmic) nonsense syllable test but not so Group IV.; this improvement ascribed to common element of rhythm. Practice of students in non-rhythmic tables did not improve memory of nonsense syllables. Practice in "immediate" memory does not improve "prolonged" memory. Improvement in "spot pattern" test in Group III. ascribed to practice in visualisation given by learning of tables (confirmed by introspection of students). Practice in prose learning *lessens* power of mechanical memorising, setting up a feeling of repugnance for it. Conclusions: (1) "Special memory training does not effect a general development in the power to memorise". (ii.) No evidence of a "common factor" which may be improved by memory work of all kinds. (iii.) There are many "related and unrelated memory functions," through which transference of practice effects may be possible; but relation is not necessarily observed by the learner. (iv.) The common elements must be separable from the complexes in which they occur: they are fundamental in nature, *e.g.* attention, imagery, rhythm. (v.) A small change in mode of procedure in learning may hinder transference of practice effect, while change in *material* may have no effect. (vi.) Interference may be produced when mind passes from pleasurable exercise to unpleasant one. (vii.) Effects of "indirect" practice do not last much beyond period when practice ceases.]

REVUE DE PHILOSOPHIE. Septembre-Octobre, 1911. A double number on the general subject of Evolutionism in the Moral Sciences. **E. Peillaube.** 'Evolutionism and Human Intelligence.' [Analysis of the process of Abstraction, as it is in man and is not in other animals.] **H. D. Noble.** 'Evolution of Emotions.' **A. Humbert.** 'Evolutionism and the Study of Languages.' **C. Calippe.** 'Social Applications of Darwinism.' [Working of the survival of the fittest in unrestrained commercial competition.] **J. Linard.** 'Primitive Monotheism according to Andrew Lang and William Schmidt.' [Monotheistic beliefs found in the earliest types of living humanity known to us, the natives of South-East Australia and the Pygmies, an argument that monotheism is not a later growth, but the earliest form of religion.] **L. Walker.** 'Evolutionism in the Theory of Knowledge and Truth.' [Pragmatism, the New Realism.] Pragmatism, as a theory of knowledge, is certainly new: and its novelty is, to my mind, the strongest argument

that can be alleged against it.' 'The progress of knowledge does not mean its entire transformation.' **J. Maritain.** 'The Evolutionism of M. Bergson.' 1^{er} Novembre, 1911. **L. Cristiani.** 'Mental Circulation.' [A new exposition of the laws of association of ideas. Suggestion not the same as Association. Suggestion goes with attention, and maintains homogeneity of thought. Association goes with distraction, and lets in variety.] **R. Marchal.** 'Symbolism and Liberty in Science.' [The concepts of physical science are not as Kantian categories, forms of the mind applied to nature, but stand for real properties of things. A fact does not lose its objectivity by being susceptible of a variety of expressions, or prompting variety of behaviour. These expressions are in correlation, and ultimately point to the same thing. Such liberty as we have is liberty of choice among these various expressions.] **Gomez Izquierdo.** 'The Philosophy of Balmes.' [The Infinite. The Moral Order conditioned on the Divine Sanctity, which is God's love of Himself. Origin of Ideas.] 1^{er} Decembre, 1911. **Dr. R. Van der Elst.** 'Supernatural Phenomena and Nervous Phenomena.' [The former, in such persons as St. Teresa, the latter, in such persons as the patients at the Salpêtrière. The former are of the *plus* sign, something superadded to the ordinary powers of healthy nature. The latter are of the *minus* sign, unhealthy, an infringement of nature.] **C. Boucand.** 'Respect for Order and Natural Law.' [A combination of the geometric, or static, with the historical, or dynamic, method of Ethics.] **A. Diès.** 'Critical Review of the History of Ancient Philosophy.' [The principal works reviewed are Markowski on *Libanius's Defence of Socrates*; Gomperz, *Greek Thinkers*, last volume of the French translation, dealing with *Aristotle and His Successors*; Werner on *Aristotle and Platonic Idealism*; Robin on the *Aristotelian Conception of Cause*; Briehier on *Chrysippus the Stoic*; Asmus, annotated German translation of the *Philosophical Works of Julian*; sundry new translations of Aristotle's *Ethics*.] **P. Le Guichaoua.** 'Value and Limits of Knowledge.' [How the object is known in sensation.] 1^{er} Janvier, 1912. **J. Le Rohellec.** 'Individual and Social Morality.' [God commands the observance of order. Order requires the individual to tend to his last end, to perfect himself and submit his instincts to the empire of reason: hence individual morality. The family is required by order: hence springs domestic morality. Order requires civil society: hence arise the duties of the individual towards society, and of society towards individuals. Order requires above all that both individuals and societies recognise the sovereign dominion of God. Thus individual morality and social morality spring from one and the same source, and run on parallel streams from one and the same principle, which transcends alike the individual and society, and imposes itself irresistibly upon both the one and the other. Thus the alleged conflict disappears.] **E. Revillout.** 'Equality in Presence of Death in Roman Egypt.' [The contents of a papyrus, dating from about A. D. 100, marked by Christian influences, arguing that in the judgment of the next world there is no respect of persons.] **J. Louis.** 'A Note on the Alleged Fideism of Pascal.' [By 'fideism' is meant a distrust of philosophy, carried so far as to rest all certainty upon the certainty of religious faith. Such fideism has been too hastily attributed to the author of the *Pensées*.] **P. Le Guichaoua.** 'The Value and Limits of Knowledge.' [A scholastic view of Idea, Sensation, Nominalism, Conceptualism, Moderate Realism, Judgment, Truth, Reasoning.] 1^{er} Fevrier, 1912. **A. Bouyssonie.** 'An attempt at a purely *a priori* demonstration of the Existence of God.' [We must recognise in arguments purely *a priori*, in the ontological arguments in particular, a value equal to that of the other proofs of the existence of God. We shall never make of it a popular proof, but that is not

necessary. Let it convince metaphysicians, that is enough.' **H. Tandière.** 'The State and the Labour Question.' [The situation in France.] **F. Mentré.** 'The Idea of Reason in Cournot.' [The argument from statistics that the course of history is becoming reasonable by degrees.] **M. Sérol.** 'Free Will.' [By the method of introspection, the validity and necessity of which, besides the experimental method, is ably maintained, it is argued that we are, within limits, masters of ourselves. A lucid piece of reasoning, to be read by determinists.] **A. Farges and P. Le Guichaoua.** [Discussion of the axiom, that the same action is at once in the agent and in the patient, in its bearing on sense-perception.] 1^{er} Mars, 1912. **M. de Wulf.** 'Civilisation and Philosophy of the Middle Age.' [Religion was pre-eminent, still philosophy was kept distinct from theology. It was an age of systematisation, and serene confidence in the ability of the human mind to attain truth.] **A. de Sertilanges.** 'Goodness in Interior and Exterior Actions.' [An exposition of the scholastic thesis, that morality is determined by the object, the end, and the circumstances.] **J. Saulze.** 'The Hylszoist Monism of M. le Dantec.' [M. le Dantec says of himself: 'My method consists solely in an ardent faith in universal mechanism. I believe that all facts are susceptible of a mathematical statement.' He will have no final causes, no metaphysics, no theology, a sort of French Haeckel.] **A. Lecière.** 'The Philosophy of the *As If*.' [A review of M. Vaihinger's book with this title, presenting all knowledge as a pure Symbolism, the whole truth of which consists in the speculative or practical success attained by using it.] **M. Sérol.** 'Scientific Studies and Religious Belief.' [The tendency of the former to subvert the latter, not by refuting it, but by superinducing an incompatible mentality.] 1^{er} Avril, 1912. **J. Bonnifay.** 'The *a priori* Demonstration of the Existence of God.' **A. Bouyssonie.** 'Reply to M. Bonnifay.' [Two interesting arguments, one against, the other for, the Anselmic proof. M. Bonnifay assumes that truths of the ideal order are merely hypothetical of the form 'S is I' / 'S exists.' But it has been maintained that they are categorical, quite independent of the existence of corresponding actualities, and referring to possibilities only. Thereupon Anselmists argue that all perfect Being cannot be contained within the bounds of pure possibility: such Being, if possible at all, must exist. The transition from the ideal to the actual order is valid in this one case of the apex where both meet. Gaunilon's island was an impertinence. The Anselmic Argument is not 'relegated to the number of genial errors,' as M. Bonnifay would have it, nor will be, till Platonism goes there also and higher mathematics.] **H. Colin.** 'The Crisis of Mutationism.' [Difficulties in the way of the 'sudden variations' of De Vries. Apparent new species turn out to be parasitic disease. Speculation on the ancestry of the potato.] **F. de Grandmaison.** 'Neurosis and its Moral Treatment.' [That neurasthenia, hysteria, and 'phobias' are better treated by personal influence and moral suasion than by hypnotism. A practically useful paper.] **M. de Wulf.** 'Currents of Philosophy in the Middle Age.' [Thomism, Scotism, Terminism of Ockham.] **J. Bulliot.** Review of M. Dunan, *Les deux idéalismes*. **Dr. van der Elst** on the cures at Lourdes.

ARCHIVES DE PSYCHOLOGIE. Tome xi., No. 1. **D. Katzaroff.** 'Contribution à l'étude de la reconnaissance.' [A study of recognition, both from the subjective and from the objective (time, correctness) side. After an analytical statement of the problem, and a review of current theories, the author reports experiments on the recognition of visual forms (for the most part, complicated geometrical patterns). He concludes that the process of recognition comprises two distinct moments:

the feeling of familiarity, which is a direct reaction antecedent to any mode of mental elaboration, and which constitutes direct or pure recognition: and the arousal of memories, which transforms direct into indirect or apperceptive recognition. The feeling of identity is not to be confused with the judgment of identity, which ordinarily comes later; it is also independent both of degree of assurance and of all conscious localisation in time or space. There is no constant difference, subjective or objective, between correct and incorrect recognition; the most that can be said is that the more stable the recognition, the more likely on the whole is it to be correct. There are probably typical differences in the recognitive mechanism. The feeling of familiarity itself is explained by the hypothesis that a sensation, appearing for the first time, is associated to the feeling of self, enveloped by this feeling; when, then, it reappears, it comes with the character of the previously experienced, of something that belongs to the self.] **E. Claparède.** 'Réognition et moitié'. [The theory of recognition outlined at the end of the preceding paper accords closely with that to which the writer had been led by experiments upon a hypnotic subject and a patient afflicted with Korsakoff's disease. Inability to recognise may co-exist with the arousal of associations, with the presence of adaptive reactions, and with the capacity to form habits. We must, then, assume two types of connexion in consciousness: that of idea with idea, and that of idea with the processes constituting the self, the personality. The feeling of familiarity, of belonging to the self, is the link which joins a memory-image to these self-processes. So we understand why loss of recognition usually brings with it loss of the power of voluntary recall; a voluntary act is an act whose determination implies the intervention of these same self-processes. An appendix reports cases of recognition in despite of inaccuracies in the memory-image of a visual perception.] **H. Preisig.** 'Notes sur le langage chez les aliénés'. [Neologisms appear in the speech of the insane under very various conditions. Certain hallucinations and ideas of delirium require the neologism for their adequate expression. The novel words may be due, further, to exuberance of imagination (paranoid dementia, general paralysis, mania); to symbolism, confusion by external resemblance, and imprecision of ideas (*dementia præcox*); to affectation and mannerism (*dementia præcox*, epilepsy, imbecility); to change of words by defective articulation, or defective memory in writing (general paralysis); to condensation (*dementia præcox*); and to contagion. There are obvious analogies here to factors which have been at work in the normal evolution of language.] Recueil de faits: documents et discussions. **E. Claparède.** 'L'abréviation des titres des publications périodiques.' [Suggests rules; criticises the proposals of Lipmann.] Bibliographie. Notes diverses. Tome xi., No. 2. **J. Varendonck.** 'Les témoignages d'enfants dans un procès retentissant'. [A man of thirty-six, married, the father of three children, a steady workman, of good standing in his community, is charged on the testimony of ten-year-old children with the rape and murder of a girl of nine. Public and judicial opinion is strongly against him; but his counsel fortunately calls the writer of this paper as expert witness to the value of children's evidence. The paper opens with a newspaper article, which introduces the reader to the case; then follows the author's full report, based on experimental work in his school and on an analysis of the incriminating testimony—which collapses so completely that the whole affair would be ludicrous had not a man's life been at stake.] **E. Cramaussel.** 'Le sommeil d'un petit enfant; nouvelles observations.' [Gives the results of observations from the beginning of the fourth to the end of the sixth month; similar observations, to the end of the

third month, were reported in vol. x. Characteristic curves are figured for the onset, mid-period, and lightening of sleep. Sleep under various forms of stimulation shows various types of breathing curve, which are distinguished as tranquil, strained, depressed or fatigued, and sensitive or emotive. Stimulation by odours seems to show that there is affective consciousness in sleep, but of an obtuse, sluggish and circumscribed kind. There is no evidence of dreaming, or of any play of ideas; on the other hand, ideas are not far off; for there are signs of adaptation of the attention, and of something like 'mental work'.] **A. Chojechi.** 'Contribution à l'étude de la suggestibilité.' [Tests by aid of Guidi's warning box, Ochrowicz' hypnoscope, and Binet's progressive lines. There is no correlation between the three forms of suggestibility. On the other hand, there is inverse correlation of suggestibility (Binet) and accuracy in the cancellation test; hence it is probable that sustained attention plays a certain part in the test with lines. Fewer women than men are suggestible by the Binet test, but the degree of their suggestibility is greater.] *Recueil de faits: documents et discussions.* **F. U. Saffiotti.** 'Rapport sur le laboratoire de psychologie pure et appliquée de la ville de Milan pendant la direction de M. le Prof. Z. Treves (1 Mars, 1908—28 Avril, 1911).' [Historical sketch, equipment, teaching, research; a tribute to the memory of M. Treves, whose untimely death is a heavy loss to experimental psychology.] **A. Elmer.** 'VIII^e Conférence suisse pour l'éducation des anormaux (Berne, 1911).' **E. Lombard.** 'Questionnaire sur le langage dans le rêve.' *Bibliographie.* **E. Claparède.** *Psychopédologie et Pédagogie*, i. Tome xi., No. 3. **W. Radecki.** 'Recherches expérimentales sur les phénomènes psycho-électriques.' [After a full account of previous work on the psychogalvanic reflex, the author describes experiments of his own, made with galvanometer and battery, and with capillary electrometer. His conclusions are as follow. (1) *Physical.* Under certain kinds of mental stimulation, there is change in the total conductivity of the human body for an exosomatic current; the stimuli used nearly always produced an enhancement of conductivity. Various forms of mental stimulation produce also static changes of electrical potential at the surface of the skin; no law can be made out as to the direction or amount of these changes. (2) *Physiological.* The changes in conductivity are caused by modifications of gaseous exchange, which depends directly upon modifications of circulation (in the case of mental stimulation, upon vasomotor modifications). The changes of potential result from the release of electricity which occurs during glandular activity; they thus depend directly upon secretory and excretory processes. The two modes of physiological function here described may exert reciprocal influence, so that either may be the indirect cause of a physical phenomenon depending directly upon the other. (3) *Psychological.* The psychoelectric reaction is valuable as an objective indication of the degree in which an emotive factor is bound up with mental stimulation, with the presence of image, idea or thought. It is extremely sensitive, and in so far superior to sphygmograph, plethysmograph, etc. Unfortunately, it has no comparative value; individual differences of reactivity are enormous; so that its differential function is restricted to successive states of one and the same observer. In an appendix the author remarks that his results are in substantial agreement with those of the independent investigation of Wells and Forbes.] *Recueil de faits: documents et discussions.* **C. Werner.** 'VI^e Réunion des philosophes de la suisse romande, Rolle, 22 Juin, 1911.' *Bibliographie.*

ARCHIV F. D. GESAMTE PSYCHOLOGIE. Bd. xx., Heft 3. C. Minnemann. 'Untersuchungen über die Differenz der Wahrnehmungsgeschwindigkeiten von Licht- und Schallreizen. i. Theoretische Erörterungen über die Differenz von Wahrnehmungsgeschwindigkeiten.' [This introductory paper, which deals with questions of terminology and theory, outlines what may be called an empirical attitude to psychological time, and defends it against Wundt's doctrine of apperception. Rate of perception is measured by the time which elapses between the incidence of sensory stimulus upon sense-organ and its coming to consciousness (*erstes Bewusstwerden*); the phrase is therefore indifferent; we may speak, as we prefer, either of *Wahrnehmung* or of *Auffassung*. Temporal displacement consists simply in a discrepancy between the subjective temporal arrangement of sensations and the objective temporal sequence of stimuli. We must according recognise, first, that the adjective 'positive' and 'negative' are relative only, referring to a delay of perception that is less or greater than the delay of the perception chosen (for convenience) as norm; and, secondly, that the displacement, as a deviation of the subjective temporal series, is always to be measured on the subjective side: failure to regard these principles has led to great confusion. Subjective simultaneity is represented not by a point but by a period or zone of time. Theoretically, this extension must be considered as an immediate fact of consciousness. Practically, it determines our comparison of rates of perception: if, e.g., we lay the two zones for the time-orders light-sound, sound-light end to end, and find the middle point of the total zone, the distance (positive or negative) of this middle point from the zero point of displacement gives the average difference of rate of perception.] 'ii. Bisheriger Stand der Untersuchungen über die Wahrnehmungsgeschwindigkeit von Licht- und Schallreizen.' [Review of work done by the methods of reaction, of direct comparison of two sense-impressions, and of complication. The harvest of assured results has been scanty. Reactions seem to show that sound is apprehended more quickly than light; and that, in favourable cases, the rate of perception is less than 100; but there are critical doubts. Repetition appears to favour the sound, both in the direct comparison of sound and light, and in complication experiments. Practice, in these latter experiments, seems mainly to affect the visual process.] 'iii. Experimentelle Untersuchung über die Wahrnehmungsgeschwindigkeit von Licht- und Schallreizen, nach der Methode direkter Vergleichung.' [Description of apparatus; determination of physical latencies; results. There is no constant difference in the rate of perception of sight and sound. Usually, sound is preferred; but the result depends upon circumstances, chief among which are stage of practice, and intensity and duration of stimuli. Precision of temporal apprehension (expressed in the width of the zone of simultaneity) depends largely upon practice; also upon intensity and duration of stimuli. Quality appears to operate by way of the correlated intensity or duration. All these are objective factors: the test of subjective factors is reserved for a later paper, which will deal with the temporal apprehension of stimuli chosen from the same sense-department. The uniformity of the present results suggests that the same laws may hold for the rate of perception of isolated stimuli.] Literaturbericht. Einzelbesprechungen. [Huther on Klages, *Prinzipien der Charakterologie*; Treves on Weiler, *Untersuchungen über die Muskelarbeit des Menschen*; i. *Messung der Muskelkraft und Muskelarbeit*.] Referate. Bd. xx. Heft 4. V. Benussi. 'Über die Motive der Scheinkörperlichkeit bei umkehrbaren Zeichnungen.' [If the appearance of tridimensionality is due to associative factors (e.g., the look of stability), then

different positions of a given figure should give reaction times, for this appearance, of uniformly different lengths. The times do, in fact, differ widely for the different positions; but their course forbids exclusive interpretation either by association and assimilation or by Wundt's fixation-hypothesis. Putting together objective and introspective results, the writer theorises as follows. There are ideas that are independent of stimulus (*reizfrei*), such as those of musical interval and of spatial form; and there are ideas that are dependent on stimulus (*reizgebunden*), such as those of tone and colour. In the present case we set out from an idea of the second sort (the black and white of the figure), and rise to an idea of the first sort (tridimensionality). How is the passage mediated? By way of the intermediate idea of a bidimensional form, which then brings up associatively the idea of corporeality. Details are reserved for a further paper.] **Hauptmann Meyer.** 'Experimentelle Analyse psychischer Vorgänge beim Schiessen mit der Handfeuerwaffe: ein Versuch.' [Introspective account of the experiences involved in raising the gun to the shoulder, aiming, and firing; difficulties encountered in the training of recruits; suggestion that the methods of experimental psychology be applied to their analysis and removal.] **G. Anschuetz.** 'Über die Methoden der Psychologie.' [An introductory section discusses the nature of scientific investigation at large; the difference between method and procedure, between law and rule; the inadequacy of subsumption of particular facts to concepts; the nature (objective and subjective) of presuppositions. The direct method of psychology is introspection. We cannot introspect a present experience; but we are not confined to memory; introspection is a temporal process, during which fragments of the experience are actualised once more, and thus grasped directly. Systematic introspection is inductive; but it differs from the induction of physics in its non-causal character and in its requirement of a large number of instances. It also involves reduction, i.e., the reference of particular to general facts. A psychological phenomenology thus has at its command description and analysis, interpretation and reduction, all based upon the direct introspective experience. Yet, for exact research, an objective control is necessary; and this is found in the indirect method of experiment, first the psychophysical, and then the strictly psychological, which permits of recourse to the principle of variation, and allows a clear formulation and delimitation of problems, and a precise mode of instruction. Auxiliary methods are found, lastly, in child psychology, psychopathology, social psychology and animal psychology.] **Literaturbericht. Einzelbesprechung.** [Urban on Brown, *The Judgment of Difference with Special Reference to the Doctrine of the Threshold in the Case of Lifted Weights.*] **Referate.** Bd. xxi., Heft 1, bis 3. **F. Hacker.** 'Systematische Traumbeobachtungen mit besonderer Berücksichtigung der Gedanken.' [A study based, in the main, on the writer's observations of his own dreams during 450 consecutive nights. Dreaming is characterised (in varying degree, according to the depth of sleep) by retrogression of the mental 'functions'; self-consciousness lapses, reasoning and true volition are in abeyance, attention is both weak and instable, and consciousness lacks the guidance of determining tendency. It follows that all available psychophysical energy is at the service of ideas; and these, since they appear in a world of space and show no dependence on the will, are realised, under the regular conditions of the dream, as perceptions. The principal difference between waking and dreaming is then twofold. (1) In the dream, there is disassociation of perception and meaning, of 'idea' and 'thought'; ideas occur without accompaniment of meaning, or (as is especially frequent with verbal ideas) with a meaning

foreign to that of waking experience. (2) The course of ideas is undirected: some particular idea stands out, and forms the centre of a constellation; the scene thus composed gives place, associatively, to another; and so on. There is rarely any continuity from scene to scene; thought in light sleep an invading sensation or idea may have a retroactive effect, and may thereby produce the illusion of continuous development. Feelings, which like meanings are curiously independent of the ideas which they accompany, seem to be due for the most part to sensations of temperature and organic disturbances. External stimuli have a relatively slight influence; they merely modify the existing constellation; the usual origin of dreams is central, and not peripheral. A dream may last for 10 min. or more, though as a rule it is shorter. The first dreams of a night derive their material from the dream-day; those of deeper sleep from more remote experiences; morning-dreams from the dreamer's professional occupation. The author's results do not accord with the views of Freud.] **R. Pauli.** 'Über die Beurteilung der Zeitordnung von optischen Reizen, in Anschluß an eine von E. Mach beobachtete Farbenscheinung.' [Mach observed that if two red squares are illuminated, in the dark room, by an electric spark, the square directly seen looks red, while that seen in indirect vision looks green; and he explains the observation by the delay of attention to the second stimulus. To test this explanation, the author undertakes a systematic study of the conditions, peripheral and central, of our judgment of the temporal order of visual impressions. He finds—to come at once to the main point—that simple concentration of attention upon the one of two given stimuli leads to no temporal illusion; but that the exclusive consideration of a particular temporal relation (e.g., 'Left first!') produces an illusion which varies, with circumstances, from $\frac{1}{10}$ to $\frac{1}{15}$ sec. This temporal displacement cannot be ascribed to change of sensation, to shift of attention,—both implied by Mach's theory,—or to eye-movement: it is due rather to the mode of activity of the 'functions' which are directed upon the sensations, the functions of attention (degree and time order of apperception of stimuli and of temporal apprehension (tendency of judgment). Mach's phenomenon, as is shown by its conditions (elimination of contrast, indirect vision, stimulus of not too brief duration), simply illustrates certain laws of colour vision with the peripheral retina.] **E. Westphal.** 'Über Haupt- und Nebenaufgaben bei Reaktionsversuchen.'

[We usually read a scientific work with a definite aim in view; but the dominance of this aim does not prevent our taking account of outlying features and references; we are not obliged to re-read, if we desire to utilise the work in a different way; in short, our reading is controlled by a sort of hierarchy of purposes. The present paper is an elaborate study (over 200 pp.) of the combination of purposes in a particular, fairly simple case. The observer reacts to a complex visual stimulus, an irregular polygon, which varies in two ways: in number of angles, and in position of the longest side. First of all, three series are taken under the simple instructions: (1) A polygon will be shown; you are to note the number of its angles, (2) its longest side, (3) the number of angles and the longest side. The next two series involve subordination without specialised form of instruction; (4) You are primarily to note the number of angles, and secondarily the longest side, or (5) conversely. The results lead to the discrimination of various forms of subordination, which are then synthesised in further experimental series. Thus it appears (a) that the instruction may be obeyed, the set task accomplished, at different levels of consciousness (*Bewusstseinsstufen*): the observer may report an explicit identification (*Konstatieren*), a potential knowledge on the basis of observation

(*Beachten*), mere conscious presentation, and guesswork or inference. Instructions are therefore given (6) to identify both aspects of the stimulus, (7), (8) to identify the one and to observe (*Beachten*) the other, and (9), (10) to observe the one, while the other is simply given in consciousness. It appears (*b*) that the instruction renders the one task materially (as distinct from formally) dependent upon the other; the synthetic experiment accordingly prescribes: (11) You are to note number of angles and longest side; but this side is to determine the figure; the others are just to group about it. Lastly, it appears (*c*) that the order in which the twofold task is performed is merely an indication of subordination; and the synthetic experiment (12) with predetermination of the order of performance confirms this result; a given order is compatible both with absence of subordination and with subordination of either task to the other.—Such is the course of the investigation. In brief sum, a 'subordination', that is, the establishment of a hierarchy of purposes, consists in the observer's intentional adherence to some 'structure' which has taken shape in the period of practice. A 'structure' is a mode of procedure which is characterised in experience by certain formal features: the 'level of consciousness' at which the separate individual contents are given, and the order of succession in which the part-tasks are performed. (The term *Bewusstseinsstufe* is perhaps unfortunate; at any rate, it must be understood to refer to the observer's attitude or functional relation to the object of perception; 'level of consciousness' means 'level at which the cognitive function is working'.) These two formal moments of structure, together with a material dependence of the secondary upon the primary task (in Series 5, *e.g.*, the longest side might stand out sharply and at once, while the impression of the total figure was extremely indefinite), are the principal distinguishing marks of a subordination.] **E. Leschke.** 'Die körperlichen Begleiterscheinungen seelischer Vorgänge.' [Critical review of E. Weber, *Der Einfluss psychischer Vorgänge auf den Körper*, 1910, with analytical table showing the results of eleven investigations.] **J. Rieffert.** 'Bericht über den IV. internationalen Kongress für Philosophie zu Bologna vom 6-11 April, 1911, insbesondere die psychologische Sektion.' Bd. xxi., Heft 4. **V. Rakic.** 'Gedanken über Erziehung durch Spiel und Kunst.' [Vital organisation rests upon the balanced interplay of two fundamental forces or capacities, the capacity to *repeat* and the capacity to *change* reactions. The former has normally a certain advantage (instinct, vegetative functions), which it seeks unduly to increase; since, however, its nature is to divide into local and special forces, it may be met successfully by a temporary concentration of the capacity to change, which itself is, on the contrary, a general, outwardly undifferentiated, motile force. The two capacities are thus antagonistic, while yet the atrophy of either one means the atrophy of the other; a due proportion must be observed; and we find, in fact, all sorts of regulations in life that make for its observance. These will naturally appear either as restriction of repetitions or as increased opportunity for variation. Under the former head fall sensory adaptation, fatigue, tedium, the tendency to reduce to minimal and schematic terms what must perforce be repeated (mechanisation, abstraction, conventionalisation), and the tendency to close routine chapters (vegetative functions; 'dropping the shop'). Under the latter head fall, from different points of view, sport, recreation, fêtes, appetisers and stimulants, sexual reproduction, and more especially play (games of imitation and of combat) and art. These activities refine and point the sensory, motor and intellectual functions; augment the strength and resistance of the psychophysical organisation; and bring with them an enhanced bodily and

mental adaptability. Or, more technically, the two activities, in so far as they include an element of conflict, develop the formative processes of will; excluding this element, they develop the functional processes of intellect; in both forms, they develop the nutritive processes of feeling. The author, on this basis, shows the value of art and play for education. Appendices deal with theories of play, and with the biological evidence for the writer's view. A bibliography is added.] **E. Weber.** 'Bemerkung zu der Abhandlung "Die körperlichen Begleiterscheinungen seelischer Vorgänge".' **E. Leschke.** 'Erwiderung auf obige Bemerkung von Ernst Weber zu meiner Abhandlung "Die körperlichen Begleiterscheinungen seelischer Vorgänge".' Literaturbericht. **N. Braunshausen.** 'Eine Krisis in der experimentellen Psychologie?' [Review of N. Kostyleff, *La crise de la psychologie expérimentale*; general account of the status and promise of experimental psychology.] Referate. Bd. xxii., Heft 2 und 3. **A. Messer.** 'Husserl's Phänomenologie in ihrem Verhältnis zur Psychologie'. [Husserl's criticism of psychology, in part anticipated by psychologists themselves, holds rather of the provisional or the extreme in current research than of the science as a whole. His phenomenology, though he separates it sharply from psychology, is actually the basal or descriptive portion of psychology, distinguishable only from explanatory and physiological psychology; it has, as he affirms, a special importance for theory of knowledge.] **A. Kronfeld.** 'Ueber die psychologischen Theorien Freuds und verwandte Anschauungen; Systematik und kritische Erörterung.' [Exposition and criticism, in detail, of Freud's system of psychology, i.e. of the psychological principles, elements, mechanisms, inductions upon which the more popular applications of Freudism rest. The author commends the tendency of the school to push psychological and psychopathological analysis to its uttermost individual limits; and he recognises, with unstinted admiration, the subtle psychological intuition of Freud himself. The system, however, considered logically and psychologically as system, is indefensible. The doctrines of Bleuler and Jung differ, in many as yet unmediated ways, from Freud's principles; the theory of the 'complex' (here the writer differs from Isserlin) is a valuable contribution to psychiatry, though the interpretation put upon it by the Zurich school is not acceptable.] **R. Pettow.** 'Zur Psychologie der Transvestie: zugleich ein Beitrag zur reform des § 51 St. G. B.' [Discussion of the impulse, by one who is himself subject to it, to adopt permanently or periodically the clothing of the opposite sex or to return to that of childhood. Careful distinction must be made between the imperative or genuine impulse, with psychical transformation, and a mere leaning or inclination (permanent or temporary) which involves no such psychosis. Proposed alteration of the law that deals with discovered cases: illustrations.] **E. Rignano.** 'Von der Aufmerksamkeit. I. Affektiver Widerstreit und Einheit des Bewusstseins'. [Attention arises phylogenetically, with the distance-receptors, and consists in the opposition of two affective tendencies, a primary tendency called out by the object, and a secondary, called out by the primary, which holds this latter in suspense. The 'becoming conscious' of a past state of mind depends upon the complete or partial identity of its affective constituent with that of a present mental state; and the unity of consciousness simply expresses the fact that the simultaneous release of independent affective tendencies is impossible: in attention, e.g., there is and can be but one primary tendency. Attention is thus a sufficient, but not the sole condition of 'consciousness'; an affective tendency may work itself out unimpeded. Conversely a stimulus may reach the sensorium, and yet (if attention is elsewhere; if no affective tendency is aroused) may remain unconscious.]

'Von der Aufmerksamkeit.—II. Vividität und Zusammenhang.' [The intensity of a sensation belongs to its specificity; its vividness is a matter of the active quantum of nervous energy whereby the sensation (or idea) is formed. Vividness, in attention, thus depends upon a number of conditions: adaptation of the sense organ, mnemonic summation, affective facilitation, and finally direct affective intensification or dynamogeny. The interconnexion of ideas in attention is, negatively, a matter of inhibition; counter affective tendencies are directly inhibited, and foreign sensations, though they reach the sensorium, are thus excluded from consciousness. Positively, we have an affective selection among the available unconscious processes, and also a direct excitation of sensory elements by way of the primary affective tendency.] **W. Moede.** 'Gedächtnis in Psychologie, Physiologie und Biologie: kritische Beiträge zum Gedächtnisproblem.' [Current scientific thinking is dominated by the principle of economy, so that there is a strong trend towards monism: logic reduces the table of categories to the single law of identity, psychology becomes sensationalism, natural science relies on energy, the sciences of life and mind on evolution. So the concept of memory, which belongs primarily to psychology, has been extended first to the organic, and then even to the inorganic worlds. Is the extension justified? To answer this question, the author reviews the psychology of memory (perception and recollection, association, memory); then passes by way of 'persistence' (*Nachwirken*), the alleged fundamental fact of memory phenomena, to the use of memory in physiology and biology; discusses the doctrine of causation in biology; and finally outlines the resulting metaphysics, the *mnemisch-Weltbild*. His conclusion is unfavourable to Hering and Semon. (The article, nearly 80 pp. long, is full of interesting details, critical and expository; it is, however, written in an aphoristic style which makes a summary impossible.)] **M. Ponzio.** 'Ueber einen neuen Zirkel für die Bestimmung der simultanen Raumschwellen der Korpernaut.' [An aesthesiometer which avoids the errors of unlike pressure and successive application of the points, at the same time that it allows of variation of degree of pressure.] **R. Hildebrand von Renauld.** 'Zur Psychologie eines Sprichworts (Geteilte Freude ist doppelte Freude; geteilter Schmerz ist halber Schmerz); eine psychologische Studie.' [If communicated pleasure is, by reflected empathy, doubled pleasure, the communication of sad news should—and does—similarly increase the sorrow. But some pleasures are oppressive; and their communication is a relief, not an enhanced pleasure. Finally the pleasures of others are often grudged, and their sorrows enjoyed.] **G. E. Mueller.** 'Gesellschaft für experimentelle Psychologie'. Literaturbericht.

ZEITSCHRIFT FÜR PSYCHOLOGIE. Bd. lx., Heft 1 und 2. **K. Groos.** 'Untersuchungen über den Aufbau der Systeme. IV. Die Behandlung kantischer Dualismen durch die unmittelbaren Nachfolger Kants.' [The present instalment (see *MIND*, xviii., 481; xix., 144, 604) discusses, with post-Kantian illustrations, the typical ways in which a dualism may be overcome. In radical solution the one member of the antithesis is simply stricken out (Jacobi, the philosophy of immanence). Monistic solutions assume a unity which embraces the terms of the original dualism; they may be static (Reinhold) or genetic (Schiller). Solutions by interpolation may also be either static (Schiller) or genetic (Reinhold). The Leibnizian solution (Maimon) makes the two terms extreme points on a vertical scale, the one representing the infinitely weak degree of the other. The relativist (Schleiermacher) asserts that the opposing terms really imply each other. The paradoxical solution (Hamann) cuts the difficulty, by offering a new doctrine in place of the proposed dualism.]

A. Prandtl. 'Experimente über den Einfluss von gefühlsbetonten Bewusstseinslagen auf Lesezeit und Betonung.' [Serious or impassioned (*bewegte*) passages of prose writing are read more slowly than cheerful or quiet; and the difference is not attributable simply to difference of the average length of the words employed. Passages of the former kinds also receive more frequent emphasis, which again is more than a matter of word-length. Finally, these passages are read with more frequent and longer pauses; but when the blank times are allowed for, their reading is still, on the average, slower.] **I. Grassl.** 'Einfache Reaktionszeit und Einstellung der Aufmerksamkeit; experimentelle Untersuchungen.' [After an historical survey of the factors which are known to influence the duration of the simple reaction, the writer describes three sets of sensorial reactions to touch: with stimulus applied always to the same spot, with place of stimulation changed in every experiment, and with change of place after a certain number of stimulations of the same spot. The 'reactions of transition' in the last series are longer than the reactions taken with an identical position of stimulus; and since the result cannot be due either to practice or to a difference in the observer's expectation, it must express the time required for a change of direction of attention. The fact that the reactions of the second series are on face and forearm shorter, on back and leg longer, than the reactions of transition in the third series, is explained by the difference of localising sensitivity; stimulations at different parts of back and leg are referred to the same general region of cutaneous space.] **W. Sternberg.** 'Die Physiologie der Kitzelgefühle.' [Discusses, with much literary quotation and many appeals to comparative philology, the conditions for the arousal of tickling; the relation of tickling to itching, creeping, tingling, pricking, scratching, etc. (all these 'feelings' are, the author thinks, fundamentally the same; they differ only in intensity); the modes of relieving ticklishness,—pressing, rubbing, scraping, scratching; and the particular forms which the feeling assumes in appetite for food, need of evacuation, the itch of lust. Medical practice errs both in separating the terms of a single group of 'affective sensations,' and also in regarding their occurrence as pathological. Experimental psychology has much to learn from comparative zoology, from veterinary medicine, and above all from the comparative study of language.] *Besprechungen.* Paul on Marty, *Zur Sprachphilosophie*; Marbe on Dürr, *Erkenntnistheorie*; Cohn on Volkelt, *System der Ästhetik*, ii.; Henning on Flournoy, *Esprits et médiums*. *Literaturbericht.*

SCIENTIA. RIVISTA DI SCIENZA. Vol. xi, 1912. No. xxi. **F. Enriques.** 'Matematiche e teoria della conoscenza' [Historical sketch of the development of the problems belonging to the common domain of mathematics and the theory of knowledge, from the times of the Pythagoreans to the logical current and the psychological current in contemporary thought. After the present reaction against scientific philosophy has died down, and when the long labour of critical researches and of analyses has engendered a loftier impetus of the philosophical conscience, will appear to the eyes of all the necessity for philosophy again to take its position on the ground of science, as it did at the great constructive epochs of thought.] **T. J. J. See.** 'The New Science of Cosmogony'. [Sketch of the new epoch in astronomy which began with the photographic work of Keeler in 1889, and with the work of Darwin, Poincaré, Arrhenius and Strömberg, and which is thus made possible, partly by the perfection of astronomical photography, and partly by the solution of the restricted problem of three bodies. This leads at once to a great increase in our knowledge of the nebulae and of their mode of development into cos-

mical systems, under laws which are demonstrated to be consistent with the established principles of the mechanics of the heavens.] **J. W. Gregory.** 'The Structural and Petrographic Classifications of Coast-types.' [A geological paper.] **E. Rignano.** 'Dell' attenzione. 2a parte: Vividità e connessione' [A continuation of previous researches. The present part contains an examination of the effects which, for sensations, images and ideas, result from the intimate nature of affective contrast and from the fundamental characteristics of unity of consciousness which belong to attention. These effects may be summed up in the two words: *vividity* and *connection*. Further researches are announced.] **M. Hoernes.** 'Ursprung und älteste Formen der menschlichen Bekleidung.' [Discussion of the theories with regard to the origin of clothing, which depend on "practical" or "ideal" (prehistoric prudery) exigencies. We must be careful not to lay stress exclusively on such and such particular motive and to make deductive conclusions according to the customs of primitive people of our days. The results will only have value in the measure that account is taken of all possible motives.] **A. H. Sayce.** 'The Laws of Babylonia.' **E. Goblot.** 'Le concept et l'idée' [A discussion of the *denotation* and *connotation* of names, in which, however, the advances made in modern logic are not dealt with. In the treatment of ideas M. Goblot does not in all respects go as far as Plato.] Book review. General reviews. [Critical article by **F. Savorgnan.** on various anthropo-sociological articles, under the title 'La race'.] Review of reviews. Chronicle. French translations of the German, English and Italian articles.

ZEITSCHRIFT FÜR PHILOSOPHIE UND PHILOSOPHISCHE KRITIK. Bd. cxliv., Heft 1. **A. Döring.** 'Zur Parmenides und Zeno von Elea.' **A. Lewkowitz.** 'Die Religionsphilosophie des Neukantianismus.' **Hans Klasen.** 'Die Ideen Gott, Unsterblichkeit und Freiheit bei Schiller.' **P. Schwartzkopff.** 'Ein Beitrag zur principiellen Beurteilung des heutigen Monismus.' Rezensionen, etc.—Bd. cxliv., Heft 2. **H. Schwarz.** 'Zum 60. Geburtstage Richard Falckenberg.' **Johannes Rehmke.** 'Anmerkung zur Grundwissenschaft.' **H. Aschenasy.** 'Grundlinien zu einer Phänomenologie der Musik (Schluss).' **O. Braun.** 'Herders Kulturphilosophie.' Rezensionen, etc.—Bd. cxlv., Heft 1. **Otto Braun.** 'Herders Kulturphilosophie (Schluss).' **H. Siebeck.** 'Über Monismus und Dualismus.' **H. Schoen.** 'Heinrich Bergsons philosophische Anschauungen.' Rezensionen, etc.—Bd. cxlv., Heft 2. **Felix Somlo.** 'Das Werthproblem.' **Johannes Rehmke.** 'Anmerkungen zur Grundwissenschaft.'—II. Rezensionen, etc.—Bd. cxlvi., Heft 1. **Hans Schmidkunz.** 'Grundzüge einer Lehre von der logischen Evidenz.' **Felix Somlo.** 'Das Werthproblem (Schluss).' **W. Kinkel.** 'Literaturbericht.' Rezensionen, etc.

RIVISTA DI FILOSOFIA. November-December, 1911. Anno iii. Fasc. 5. **Benvenuto Donati.** 'Dottrina Pitagorica e Aristoteleica della Giustizia.' [Endeavours to establish a connexion between Aristotle's theory of justice and the Pythagorean philosophy of numbers as stated in a fragment of Archytas, with copious reference also to the theories of Hippodamus of Miletus. The article occupies more than half the present number of the *Rivista* and is more than three times as long as the Fifth Book of Aristotle's *Ethics*.] **Paolo Rotta.** 'Ancora della Filosofia di Federico Paulsen.' [Paulsen's system is an illogical compromise between physical science and ideal philosophy whose failure is due to his having attacked the problem of existence before solving the problem of knowledge.] **Pietro Ragnisco.** 'La Cavatteristica della Filosofia Italiana.'

[Just as English philosophy since the Middle Ages has been utilitarian and German philosophy since the Reformation idealistic, so Italy would find salvation by returning to the calm naturalism of the Renaissance.] **L. M. Billia.** 'Rompicapi del *Parmenide* e la tragedia del Pensiero.' [A discussion on the meaning of predication as illustrated by Plato's *Parmenides*, concluding with the very questionable assertion that 'we have to choose between Absolute Egoism and Mysticism; and perhaps Mysticism is the sole, the true, and the only (*sic*) philosophy'.] **Ferdinando Belloni-Filippi.** 'E il Buddhismo ma Religione o una Filosofia?' [As a working definition of religion this writer proposes: the recognition of intelligent supersensible forces as objects of hope or fear, adored and invoked to prevent evils or to obtain favours; and, so understood, he insists that Buddhism is a religion.] **A. Faggi.** 'Un moralista dimenticato.' [The forgotten moralist in question published an ethical treatise in three thick volumes in 1878, and the sole reason for reviving his memory seems to be that, writing in Italy so long ago he fearlessly based morality on pure reason.] Recensionii, etc. Anno iv., Fasc. 2. March-April, 1912. **Giuseppe Zuccanta.** 'I Cirenaici.' [Relates the well-known story of how the hedonism of Aristippus turned into the pessimism of Hegesias.] **Franz Weiss.** 'Il pensiero di Giambattista Vico.' [While praising Croce's recent book on Vico, the writer complains that it does not bring out the debt of modern Biblical criticism to the *Scienza Nuova*.] **Michele Losacco.** 'La filosofia dell'organismo.' [Claims, as against Driesch, the whole world of consciousness as, still more than biology, fit for the application of the teleological method.] **Vittorio Machioro.** 'La ricerca del simbolo nelle arti figurative.' [The writer recommends his own symbolism in preference to all others.] **Luigi Visconti.** 'Evoluzione e Dissoluzione della Coscienza religiosa.' [Religion, being a synthesis of all men's spiritual powers in presence of the problems of destiny, cannot conceivably disappear from the world.] **Alessandro Bonucci.** 'Libertà di volere e Libertà politica.' [Against State socialism.] Recensionii, Notizie, etc.

IX.—NOTES.

NOMINALISM IN MATHEMATICS.

A REVIEW by Prof. A. E. Taylor in No. 82 of *MIND* (p. 280) suggests some reflexions on nominalism in Mathematics. Prof. Taylor says: "The modern developments in mathematics are, rightly understood, the very reverse of a victory for any form of Nominalism. In Mathematics, Nominalism should mean the doctrine that the symbols with which we operate are the objects which we are studying, *e.g.*, that the associative and commutative laws of Addition and Multiplication are actually statements about the written or printed symbols + and \times . This is a view which has had its supporters, but it is not to them that we owe the great developments like Cantor's Theory of the Transfinite, or the reconstruction of the calculus on a sound logical basis."

Cantor¹ has expressly protested against the theory, advocated by Helmholtz and Kronecker in 1887, that the integer ordinal numbers are the signs we use in writing them down; but, strangely enough, he seems to have supported the view that real numbers are "signs to which certain properties are attributed".² It is quite possible to maintain that

¹ *Zur Lehre vom Transfiniten*, Halle, 1890, pp. 16-20.

² *Math. Ann.*, vol. xxi., 1883, pp. 589-590.

Cantor is not to be taken quite literally in this statement, and that what he really means is that new entities having the properties stated are to be postulated.

The question that Prof. Taylor suggests seems to me to be a very important one from a psychological point of view. It seems to be undoubtedly true that some mathematicians to whose efforts the structure of modern mathematics is mainly due had a very strong dislike to nominalism in mathematics. This was the case with Paul du Bois-Reymond. But, on the other hand, many men, such as Heine, Helmholtz, Kronecker, Thomae, Stolz, and Pringsheim, have expressly advocated nominalism in mathematics and yet have sometimes made very valuable contributions even to rather fundamental questions. It seems to be true that the really fundamental questions of mathematics have been successfully treated only by those few mathematicians who have little or no tendency towards nominalism; but, on the other hand, philosophers, with whom the tendency towards nominalism is not usually so general, have not been markedly successful in dealing with the principles of mathematics. A discussion would be helpful.

PHILIP E. B. JOURDAIN.

CORRIGENDA.

"Euler's Circles and Adjacent Space," MIND, No. 83, p. 410 *seq.*

On page 411, in line 4, for $\bar{S} \bar{i} \bar{P}$ read $\bar{S} i \bar{P}$; in line 6, for Some \bar{S} is \bar{P} read Some \bar{S} is P, and for Some S is not P read Some \bar{S} is not \bar{P} ; and in line 7, for $\bar{S} i \bar{P}$ read $\bar{S} i P$. In the sixth line from the bottom of page 414, for $\bar{S} a P$ read $\bar{S} a \bar{P}$.

OBITUARY.

We regret to have to record the death, at Lyons, on 16th July, in the seventy-fourth year of his age, of Prof. Alfred Fouillée, Officier de la Légion d'Honneur, Membre de l'Institut, Ancien Maître de Conférences à l'École Normale Supérieure. The works of this prolific and learned writer were well known to many English readers. His literary activity and the vigour of his thinking were maintained to the end of his long and distinguished career. Among his works may be mentioned *La Philosophie de Platon*; *La Philosophie de Socrate*; *La Liberté et le Déterminisme*; *Systèmes de Morale Contemporains*; *Le Moralisme de Kant et l'Amoralisme Contemporain*; *Morale des Idées-Forces*; *Psychologie des Idées-Forces*, *Esquisse Psychologique des Peuples Europ*; *Psychol du Peuple Français*, *L'Evolutionisme des Idées-Forces*.

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MSS. and other Communications for the Editor, except those from America, should be addressed to Professor G. F. STOUT, The University, St. Andrews. All American Communications should be addressed to Professor E. B. TITCHENER, Cornell University, Ithaca, N.Y.

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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

EDITED BY

PROF. G. F. STOUT,

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CONTENTS.

PAGE

I.—Shadworth Hollway Hodgson: H. W. CARR . . .	473
II.—The Reign of Science in the History of a Race: A. H. LLOYD . . .	486
III.—Perception and Intersubjective Intercourse: W. W. CARLILE . . .	508
IV.—Implication and Algebra of Logic: C. I. LEWIS . . .	522
V.—Discussion: The 'Working' of 'Truths': F. C. S. SCHILLER . . .	532
VI.—Critical Notices: Aliotta, A., <i>La Reazione Idealistica Contro la Scienza</i> : A. E. TAYLOR . . .	536
Meredith, J. C., <i>Kant's Critique of Aesthetic Judgment</i> : J. M. O'SULLIVAN . . .	546
Urwick, E. J., <i>A Philosophy of Social Progress</i> : J. S. MACKENZIE . . .	553
Russell, B., <i>The Problems of Philosophy</i> : B. BOSANQUET . . .	556
Stirling, A. H., <i>James Hutchison Stirling: His Life and Work</i> : J. B. B. . . .	564
James, William, <i>Essays in Radical Empiricism</i> : B. RUSSELL . . .	571
VII.—New Books	576
VIII.—Philosophical Periodicals	602
IX.—Notes: P. E. B. Jourdain.—Nominalism in Mathematics . . .	623
Obituary Notice of Prof. A. Fouillée	624

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